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Missile Defense Agency (MDA) Exhibit R-2 RDT&E Budget Item Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
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COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	697,801	608,663	591,911	587,064	620,222	626,693	646,936
0304 Test & Evaluation	245,581	219,167	208,213	217,805	228,081	221,261	227,105
0704 Test & Evaluation Block 2004	140,456	0	0	0	0	0	0
0804 Test & Evaluation Block 2006	9,769	133,972	128,760	0	0	0	0
0904 Test & Evaluation Block 2008	0	0	45,184	127,791	132,309	0	3,625
0004 Test & Evaluation Block 2010	0	0	0	35,157	39,815	119,011	110,446
R104 Test & Evaluation Block 2012	0	0	0	0	0	56,161	75,884
0305 Targets & Countermeasures Core	22,697	19,868	20,209	20,719	21,075	21,609	21,979
0705 Targets & Countermeasures Block 2004	250,077	0	0	0	0	0	0
0805 Targets & Countermeasures Block 2006	24,765	224,387	158,987	0	0	0	0
0905 Targets & Countermeasures Block 2008	0	4,226	20,533	173,533	151,327	0	0
0005 Targets & Countermeasures Block 2010	0	500	2,500	5,353	41,721	191,425	162,878
R105 Targets & Countermeasures Block 2012	0	0	0	0	0	6,000	39,181
0602 Program-Wide Support	4,456	6,543	7,525	6,706	5,894	11,226	5,838

Note: The decrease in Project 0305 funding from FY05 to FY06 and out is due to a realignment of funds to the Integration Product Line in Projects 0805, 0905, and 0005.

A. Mission Description and Budget Item Justification

As part of the total Ballistic Missile Defense System (BMDS), the Test and Targets Program Element (PE) provides the resources, including targets and countermeasures development, for an integrated system-level test approach, bringing together the capabilities of the BMDS elements. This PE consists of thirteen projects: Test & Evaluation (T&E); T&E Block 2004; T&E Block 2006; T&E Block 2008; T&E Block 2010; T&E Block 2012; Targets & Countermeasures Core; Targets & Countermeasures Block 2004; Targets & Countermeasures Block 2006; Targets & Countermeasures Block 2008; Targets & Countermeasures Block 2010; Targets & Countermeasures Block 2012; and Program Wide Support.

Test and Evaluation and Targets and Countermeasures Core (Projects 0304 and 0305, respectively) provide for the implementation of test and target functions that span multiple Blocks. These projects also assist in expanding the capabilities of the BMDS in future Blocks, and developing capabilities not yet foreseen as part of a current or future Block. Block functions (e.g., Project 0704 - T&E Block 2004 and Project 0705 - Targets and Countermeasures Block 2004) include all efforts (e.g., detailed planning, hardware procurement, test execution, analysis, and reporting) necessary to test and assess a specific BMDS Block. Element participation in system-level testing, including test article procurement and test conduct, is captured in the respective element PE.

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The T&E projects provide consolidated MDA-wide capabilities and resources to support the management and execution of BMDS System and Element-level testing. With the evolution of the BMDS, testing needs have expanded beyond those of the individual elements to include testing of BMDS engagement sequences that rely on multiple BMDS elements. The structure of MDA's T&E Directorate, hereafter referred to as the MDA Responsible Test Organization (RTO), centralizes authority, control, and responsibility for all BMDS testing. The RTO is responsible for executing BMDS system tests and conducting post-test analysis to characterize BMDS system performance to support system verification. BMDS system test objectives are determined by the Responsible Engineering Organization (REO) and include threat capability in the selection of targets and test parameters. RTO activities are grouped into four functional areas: Test Policy and Integration; BMDS Combined Test Force; Test Resources; Facilities, Siting, and Environmental management.

The Test Policy and Integration program supports the development and implementation of strategic planning, test policy, standards, and procedures for creating a unified BMD test process. This program also includes funding for the BMDS Capability Assessment (BCA) team and funding for all of the Service Operational Test Agencies (OTAs) to conduct a BMDS Operational Assessment (OA). The RTO also includes the BMDS Combined Test Force (CTF) which plans, executes, analyzes, and reports all BMD system test events. The BMDS CTF consolidates the personnel, processes, and resources across MDA, including the BMDS elements, into a unified, cohesive team to execute the BMDS test program. The BMDS CTF provides for core support that spans multiple Blocks as well as the individual efforts required for the test and assessment of specific Blocks. The Test Resources program supports the development, operation, maintenance, and modernization of the T&E infrastructure supporting both BMDS System and Element-level testing. The MDA test program provides data and information to anchor the models and simulations used to verify BMDS capabilities and to support BMDS characterization and assessment. The Facilities, Siting and Environmental program provides guidance, environmental analysis and documentation, real property facility siting, acquisition, and facility operational support for BMD systems.

The BMDS RTO uses a top-down approach to develop BMDS test plans based on engagement sequence groups, system test objectives, and the overall system design provided by the BMDS REO. The BMDS CTF uses these inputs to create an integrated system-level test and analysis approach, bringing together the contributions of the various BMDS elements into combined system test events. These system test events are comprised of two or more elements interacting to verify the capability of the system in one or more of the engagement sequences; these events are documented in the Integrated Master Test Plan (IMTP). The IMTP is the foundation for developing the element Developmental Master Test Plans (DMTP) that detail the element contributions to the overall test program. Elements design their component test programs via the DMTP to support the IMTP and participate in the overall BMD system level test program. The development and acquisition of new test facilities and instrumentation are integrated into a Test Resources Master Plan (TRMP) that supports the overall test approach.

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The Targets and Countermeasures Directorate provides targets (hardware and launch services) to the MDA Elements to test the integrated BMDS. The Targets and Countermeasures Directorate oversees the associated funding for the testing. The funding for these targets reside in the Elements respective Program Elements.

A.1 System Element Description

Test and Evaluation Description:

- MDA's Responsible Test Organization (RTO) structure centralizes authority, control, and responsibility for all BMDS testing
 - Plans tests according to BMDS and Element objectives
 - Provides test ranges, instrumentation and infrastructure
 - Develops MDA test policy
 - Directs the Combined Test Force (CTF)
 - Plans, executes, and conducts analysis of BMDS ground and flight tests
 - Demonstrates integrated BMDS capability
 - Addresses critical measurements for growth and capability
 - Collects data for BMDS analysis and manages MDA data centers
 - Provides documentation of BMDS and Element performance results for use by MDA, the OTAs, STRATCOM, and senior decision makers
 - Provides civil engineering / facility acquisition expertise, oversees all construction funding, and ensures environmental compliance of all MDA activities

Targets and Countermeasures Description:

The Targets and Countermeasures Program is a supporting BMDS program that provides targets to test the integrated, layered BMDS, including targets, countermeasures, and instrumentation to support testing prior to initial defensive operational capability.

A.2 System Element Budget Justification and Contribution to the Ballistic Missile Defense System (BMDS)

Test and Evaluation Contribution to the BMDS:

- Plan and conduct testing of the BMDS Engagement Sequence Groups (ESGs) developed by the REO
- Collect and provide test data in order to support the effectiveness, suitability, survivability, and interoperability assessments of the BMDS
- Provide infrastructure and environmental compliance necessary to support increasingly complex tests
- Provide risk reduction for the BMDS through measurements flight testing to include technology demonstration, algorithm and model validation, and threat and countermeasure characterization

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- Develop MDA BMDS testing policy with common, repeatable processes

Targets and Countermeasures Contribution to the BMDS:

The Targets and Countermeasures Program develops new target and countermeasure development, risk reduction flights (tests of target prototypes), subsystem characterization, and the acquisition and maintenance of long lead target material items. Specifically, the Targets and Countermeasures program provides capability-based ballistic missile target systems to include missile subsystems and common target components, such as boosters, re-entry vehicles (RVs), countermeasures, guidance and control components, data and instrumentation packages, and launch support systems. Additionally, the Targets and Countermeasure program supports aging surveillance, refurbishment, and reuse of existing government furnished equipment such as Minuteman II and Lance missile hardware. Utilizing existing government inventories and the development of common target components, a BMDS target system is integrated and tested, thus reducing the cost and cycle time of developing and acquiring new target system hardware. To assist the government in this endeavor, a ten year prime contract was awarded in FY04 to design, develop, and test all BMDS targets.

A.3 Major System Element Goals

Major Test and Evaluation Goals:

- Form one BMDS test team under the RTO that is accountable to the MDA Director and Element program directors
- Provide leadership and guidance under the CTF for the planning, execution, analysis, and reporting of BMD system test events to support system verification
- Establish single BMD system test processes that reflect the best practices of existing Element processes
 - Benchmark and merge existing Elements and executing processes into BMDS processes
 - Develop Element Lessons Learned and Best Practices to support single BMDS test design processes
- Provide required infrastructure and environmental compliance for robust BMD system testing

Major Targets and Countermeasures Goals:

The Targets and Countermeasures Program is developing a Flexible Target Family (FTF). This approach emphasizes commonality and modularity. The FTF will minimize the set of different booster stages, provide common FTS and Instrumentation components, provide common vehicle support equipment, provide common launch support equipment, and provide common interfaces. Targets and Countermeasure Program has incorporated a Product Line strategy to better manage the Program. Product Lines consist of Systems Engineering, Launch Vehicle, Data and Instrumentation, Countermeasures, Re-entry Vehicles, Logistics, Integration, and Mission Management. Product Lines will develop common target components for BMDS testing which will reduce both cycle time and cost while maximizing flexibility. Product Lines will prove the flexibility to allow common target components to be developed, integrated, and tested.

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<u>A.4 Major Events Schedule and Description</u>			
Major Event	Project	Timeframe	Description
Flight Test			
System Flight Tests			
FT-1	0304	1Q FY 2006	<ul style="list-style-type: none"> • COMPLETED • ESG tested: Element Development Test • Participants include: GMD GFC 4.A.2.4
FTM 04-2	0304	1Q FY 2006	<ul style="list-style-type: none"> • COMPLETED • ESG tested: SM-3 EO AN/SPY-1 • Participants include: Aegis BMD 3.0/3.0E
FT 04-1	0304	2Q FY 2006	<ul style="list-style-type: none"> • ESG tested: GBI EO CD/UEWR (simulated GBI engagement) • Participants include: GMD GFC 4B.1, C2BMC 4.5, DSP-SBIRS SBR 05-2
FTG-2	0304	3Q FY 2006	<ul style="list-style-type: none"> • ESG tested: GBI EO CD/UEWR • Participants include: GMD GFC 4B.1; Beale UEWR
FTM 06-1	0304/0805	3Q FY 2006	<ul style="list-style-type: none"> • ESG tested: SM-3 EO AN/SPY-1 • Participants include: C2BMC 4.5, Aegis BMD 3.0E/3.6
FT 06-1	0304	4Q FY 2006	<ul style="list-style-type: none"> • ESG tested: Multi-Element Development Test • Participants include: C2BMC 4.5; GMD GFC 4B.1, SBX 1.6
FTG-3	0304	4Q FY 2006	<ul style="list-style-type: none"> • ESGs tested: GBI EO CD/UEWR; GBI LO/EO SBX (Possible) • Participants include: GMD GFC 4B.1; DSP-SBIRS 06-1; Aegis BMD 3.0; C2BMC 4.5; SBX 1.6; Beale UEWR
FTT-04	0304/0805	4Q FY 2006	<ul style="list-style-type: none"> • ESG tested: THAAD Interceptor EO BDR-XB • Participants include: TFCC Bld 4.0; BDR-XB(T) Radar 4.1; PATRIOT PDB 6.0; C2BMC 4.5
FTG-4	0304/0805	1Q FY 2007	<ul style="list-style-type: none"> • ESGs tested: GBI EO CD/UEWR; GBI EO AN/SPY-1; GBI LO/EO SBX • Participants include: GMD GFC 4B.1; SBX 1.6 (Shadow); C2BMC 4.5; Aegis BMD 3.6 (Shadow); DSP-SBIRS SBR 06-1; Beale UEWR
FTM 06-2	0304/0805	1Q FY 2007	<ul style="list-style-type: none"> • ESG tested: SM-3 EO AN/SPY-1 • Participants include: Aegis BMD 3.6; C2BMC 6.2
FTG 06-1	0304	2Q FY 2007	<ul style="list-style-type: none"> • ESG Tested: Element Development Test • Participants include: GMD GFC 6A.1
FTM 06-5	0304	2Q FY 2007	<ul style="list-style-type: none"> • ESG tested: SM-3 EO AN/SPY-1 • Participants include: Aegis BMD 3.6; C2BMC 6.2
FTT 06-2	0304/0805	3Q FY 2007	<ul style="list-style-type: none"> • ESG tested: THAAD Interceptor EO BDR-XB • Participants include: TFCC Bld 4.1; BDR-XB(T) Radar 4.2; Aegis BMD 3.0E/3.6; C2BMC 6.2; PATRIOT PDB 6.0 HWIL

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Major Event	Project	Timeframe	Description
FT 06-7 (TMDD-1)	0304	1Q FY 2008	<ul style="list-style-type: none"> ESG tested: Element Development Test Participants include: STSS Blk06
FT 06-8 (SMDD-1)	0304	1Q FY 2008	<ul style="list-style-type: none"> ESG tested: Element Development Test Participants include: STSS Blk06
FTG 06-2	0304	1Q FY 2008	<ul style="list-style-type: none"> ESG tested: GBI EO SBX Mod 1 (SBIRS) Participants include: C2BMC 6.2; GMD GFC 6A.1; Aegis BMD 3.6; DSP-SBIRS SBR 07-1; Beale UEWR; SBX 1.6
FTT 06-5	0304/0805	1Q FY 2008	<ul style="list-style-type: none"> ESG tested: THAAD Interceptor EO BDR-XB(T) Participants include: C2BMC 6.4; TFCC Bld 5; BDR-XB(T) Radar 4.2; Aegis BMD 3.6; PATRIOT PDB 6.0 HWIL
P6X-2	0304	1Q FY 2008	<ul style="list-style-type: none"> ESG tested: PAC-2 GEM EO AN/MPQ-53/65 Participants include: C2BMC 6.4; PATRIOT PDB 6.0; THAAD HWIL
FTT 06-6	0304/0905	3Q FY 2008	<ul style="list-style-type: none"> ESG tested: THAAD Interceptor EO BDR-XB Participants include: C2BMC 6.4; TFCC Bld 5; BDR-XB(T) Radar 4.2; Aegis 4.0; PATRIOT PDB 6.0 HWIL
Measurement Tests			
FT 04-4 (CMCM-2)	0304/0705	3Q FY 2006	<ul style="list-style-type: none"> ESG tested: SM-3 EO AN/SPY-1 (Sim) Participants include: Aegis BMD 3.0; C2BMC 4.5; TPS-X (BDR-XB(F) Surrogate); DSP-SBIRS (STSS Surrogate Test Bed)
Ground Test			
System Ground Tests			
GTD 06-1	0304	4Q FY 2006	<ul style="list-style-type: none"> Participants include: C2BMC 4.5; GMD GFC 4B.a & 6A.1; Aegis BMD 3.0E/3.6; FBX-T CR1; TFCC B4; PDB 5.5.2; SBIRS MCS 06-1; CD/UEWR (Fylingdales)
GTI 06-1	0304	4Q FY 2006	<ul style="list-style-type: none"> Participants include: C2BMC 4.5; GMD GFC 4B.1 & 6A.1; Aegis BMD 3.0/3.6; FBX-T CR1; TFCC B4; PDB 5.5.2; CD/UEWR
GTI 06-2	0304	2Q FY 2007	<ul style="list-style-type: none"> Participants include: C2BMC 6.2; GMD 6A.1; Aegis BMD 3.0E/3.6; FBX-T CR1; TFCC B4; PDB 6.0; SBIRS MCS 06-2
GTD 06-2	0304	3Q FY 2007	<ul style="list-style-type: none"> Participants include: C2BMC 6.2; GMD 6A.1; Aegis BMD 3.0E/3.6; FBX-t CR1; THAAD FCU B4; PDB 6.0; SBIRS MCS 06-2
GTD 06-3	0304	1Q FY 2008	<ul style="list-style-type: none"> Participants include: C2BMC 6.4; GMD 6A.1; Aegis BMD 3.0E/3.6; FBX-T CR2; TFCC B5; PDB 6.0; SBIRS MCS 07-2
GTI 06-3	0304	1Q FY 2008	<ul style="list-style-type: none"> Participants include: C2BMC 6.4; GMD 6A.1; Aegis BMD 3.0E/3.6; FBX-T CR2; TFCC B5; PDB 6.0; SBIRS MCS 07-1

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B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006 PB)	718,049	617,456	676,388
Current President's Budget (FY 2007 PB)	697,801	608,663	591,911
Total Adjustments	-20,248	-8,793	-84,477
Congressional Specific Program Adjustments	0	19,740	0
Congressional Undistributed Adjustments	0	-28,533	0
Reprogrammings	-8,962	0	0
SBIR/STTR Transfer	-11,286	0	0
Adjustments to Budget Years	0	0	-84,477

FY05 reduction of \$20.248 million includes the SBIR/STTR transfer and MDA reprogrammings.

FY06 reduction of \$8.793 million includes Congressional specific program adjustments (most notably \$3.4 million for Optical Sensors for PMRF (SHOTS) and \$2.55 million for Multi-frame Blind Deconvolution) and a portion of the MDA Congressional undistributed adjustment.

FY07 reduction of \$84.477 million is the result of programmatic changes which facilitate a \$17.604 million reduction in testing and a corresponding \$62.086 million reduction in targets and includes overhead/infrastructure reductions.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE			
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets			

COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0304 Test & Evaluation	245,581	219,167	208,213	217,805	228,081	221,261	227,105
RDT&E Articles Qty	0	2	0	1	0	0	0

Note: RDT&E Articles: FY06 - Delivery of Two (2) Transportable Telemetry Systems. FY08 - X-Band Transportable Radar (XTR-1).

A. Mission Description and Budget Item Justification

The T&E projects provide consolidated MDA-wide capabilities and resources to support the management and execution of BMDS System and Element-level testing. With the evolution of the BMDS, testing needs have expanded beyond those of the individual elements to include testing of BMDS engagement sequences that rely on multiple BMDS elements. MDA's Responsible Test Organization (RTO) structure centralizes all authority and responsibility for all BMDS testing. The RTO relies on the Responsible Engineering Organization (REO) to provide the system test objectives to test and assess BMDS capability. The RTO makes use of a BMDS Combined Test Force to plan, execute, analyze, and report BMD system test events. The RTO also develops the necessary test policy, test plans, and test infrastructure to conduct an effective test program. RTO activities are grouped into four functional areas; Test Policy and Integration, BMDS Combined Test Force (CTF), Test Resources, and Facilities, Siting, and Environmental management.

The Test Policy and Integration program supports the development and implementation of test policy, standards and procedures for creating unified BMD test processes which reflect the best practices of existing element processes. Mission Assurance is integrated into the entire MDA test program through the identification and application of T&E best practices into test processes and procedures for flight, software and ground testing. The Test Policy and Integration program also develops strategic plans and International policy for the RTO. Target certification reports are developed to ensure that targets are suitable to meet test objectives. The Test Policy and Integration program provides policy and guidance on Knowledge Management (KM) practices, establishing standardized documentation for test planning, test reporting, and data archiving. The program also develops, coordinates, and manages RTO inputs into the overall BMDS Program Plans. The Test Policy and Integration program supports two major assessments of the BMDS: The BMDS Capability Assessment (BCA) team and System-Level Operational Assessments. The BCA team will provide a non-advocate, independent assessment of the BMDS throughout its life-cycle. Where possible, BCA team-members will recommend changes to the current test program and mitigation efforts to reduce performance degradation, implementation, and integration risks. Operational Test Agency (OTA) funding is consolidated within the RTO so they can provide operational assessments of the BMDS. The OTAs will maintain their assessments in the OTA database which will reflect a living document of the BMDS assessment.

BMDS Combined Test Force (CTF) Core activities consist of: a. BMDS Common System Test Support; b. planning for and analysis of the Measurements Program; c. the Lethality Program, and d. the Applied Data Analysis Center (ADAC).

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<p>a. BMDS Common System Test Support includes test planning support for Flight and Measurements test events. Government personnel at SMDC plan and execute test events and SETA personnel provide support for the CTF. The Test Configuration Control Board (TCCB), a new initiative, was established to maintain BMDS system test configuration. International Programs promotes international participation in developing the BMDS through joint test and technology development activities. A new TE initiative, the Test Assurance office, will improve test event timeliness and mission success.</p> <p>b. The Measurements Program is an integrated test program established to ensure a coherent, complete, cost effective, and disciplined approach to collecting data/measurements to support characterization of the BMDS mission space (i.e., provide an understanding of how the BMDS visible, infrared and radar sensors perform when observing ballistic missile targets and countermeasures during flight). Measurements requirements are collected, prioritized and validated by the Measurements Program Assessment Team (MPAT) to support Block Characterization (understanding how the system will perform in a given configuration against a given threat), Modeling and Simulation, Validation and Accreditation, Phenomenology (understanding the physics of what was observed during a test event and its effects on BMDS sensors) and Advanced Concepts. Requirements are allocated to specific tests. Note: funding associated with Critical Measurements and Counter Measures (CMCM) flight tests are captured in projects 0804, 0904, 0004 and R104 but is managed as part of the Measurements Program.</p> <p>c. The CTF Lethality program seeks to characterize the effectiveness of BMDS engagements (i.e., determining the fate of threat targets post-engagement) and assure 10 USC 2366 requirements for BMDS lethality Live Fire Test and Evaluation (LFT&E) are achieved, and to investigate how successful a given BMDS engagement will be in destroying the incoming warhead. Laboratory, ground and flight tests are defined and executed in response to the MDA System Engineer's requirement for data on the resultant space, atmosphere and ground effects of engaging high explosive and weapon of mass destruction (WMD) payloads. Flight test data requirements are achieved by leveraging planned BMDS intercept or Measurements Program with alternative targets, supplemental payloads and ancillary sensor coverage. The CTF integrates lethality LFT&E testing across MDA and coordinates with related programs (e.g. PAC-3) to establish an efficient, requirements driven approach to BMDS lethality characterization.</p> <p>d. The Applied Data Analysis Center (ADAC) represents the primary measurements analysis effort and supports development of the BMDS Measurements test program. The ADAC encompasses mission sensor planning, data collection, analysis, and exploitation activities of the Optical Data Analysis (ODA) and Radar Data Analysis (RDA) efforts. In addition, the ADAC exploits Measurements and Systems Test data to improve future BMD Systems. This project funds the Kill Assessment Program and support for data collection and analysis of International & Special Programs. This also includes participation by the Kill Assessment (KA) Program in most MDA flight test events. To support the BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities</p>		

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<p>of the Radar Data Exploitation (RDE), Radar Cross Section (RCS) data analysis, and optical data analysis. This activity supports data planning, collection and analysis of radar for missions supported by Observation Island.</p> <p>The Test Resources Program develops, sustains, and modernizes the core T&E facilities of the BMDS test bed to support system and element-level testing and assessment. This includes development, maintenance and modernization of the MDA mobile instrumentation tool box, BMD-unique ground test facilities, and MDA data centers. The mobile instrumentation tool box includes telemetry, radar, and optical data collection assets such as three (3) test aircraft equipped with optical sensors, mobile telemetry systems, the Kwajalein Mobile Range Safety System, the Mobile Launch Platform, and the Pacific Collector Mobile Instrumentation Ship. These assets are required to collect the spatial data needed to safely execute the tests and the measurement data needed for BMDS performance evaluation. The Test Resources Program also makes focused investments to improve MDA-unique capability at Major Range & Test Facility Base (MRTFB) activities including the NP-3D improvement program with the Navy. All of these assets provide program risk reduction and test implementation capability in support of BMDS test activities. Because this core test capability is corporately sustained, the individual BMDS elements pay only the direct costs associated with their specific test efforts. The Test Resources Program uses the engagement sequences as the basis to evaluate the future resource needs of the BMDS. A continuous analysis pitting data collection requirements and test scenarios against existing and planned test assets identifies the test infrastructure needed to test the BMDS, BMDS elements, and element components as part of the engagement sequences. The Test Resources Program also includes the Pacific Range Support Team (PRST) to support the BMDS CTF with range mission planning and execution expertise, development of common standards and mission assurance, and to recommend development or modification of mobile instrumentation to support MDA testing.</p> <p>The Facilities, Siting and Environmental program provides guidance, environmental analyses and documentation, real property facility siting, acquisition, and facility operational support for the BMDS. This program oversees facility acquisition of the Military Construction (MILCON) and RDT&E construction programs. This program also provides guidance and supports the Environmental Assessment and Environmental Impact Statement process, environmental compliance, pollution prevention, and other environmental efforts. This program ensures environmental compliance of all BMDS activities with federal, state, local, DOD and international law, treaties and regulations.</p>		

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<u>B. Accomplishments/Planned Program</u>			
	FY 2005	FY 2006	FY 2007
Test Policy and Integration	25,200	26,747	32,733
RDT&E Articles (Quantity)	0	0	0

The Test Policy and Integration program supports the development and implementation of test policy, standards, and procedures for creating unified BMDS test processes. Efforts to achieve this mission include: applying best practices of existing Element processes for flight, ground and software testing; establishing standardized documentation for test planning, test reporting and data archiving; providing non-advocate, independent assessment of the BMDS throughout its life-cycle via the BMDS Capability Assessment team; providing for operational assessments of the BMDS via Operational Test Agency participation; developing target accreditation reports to ensure targets meet test objectives; providing for test mission assurance; and developing strategic Planning and strategy for the RTO. Budget is increased in FY07 due to the consolidation of funding which supports the OTA activities.

FY05 Accomplishments:

- BMDS Capability Assessment (BCA) team (formerly BOCA) continued to provide a non-advocate assessment of the BMDS readiness.
- Completed Target Accreditation Reports for the IFT-14, FTM 04-1, FT-04-2, FT-04-5, and Medium Range Target (MRT) Risk Reduction Flight to ensure target satisfies mission objectives.
- Completed Responsible Test Organization (RTO) Directive 3002.01, Establishment of the MDA RTO, March 9, 2005 which centralize responsibility and authority for planning, provisioning, executing analyses, and reporting of the BMDS test program.
- Finalized MOA with OTAs to establish the OLG; OLG facilitates communication and interaction between BMDS development community and the Service Operational test communities.
- Drafted Target Planning Process Directive to establish long-term planning of target capabilities required for BMDS testing.
- Drafted Guideline for MDA Formal Test Reviews and Post-Test Reporting Requirements to formalize MDA test review process and post-test reporting activities. These reviews provide assurance that test design, planning, and execution activities are progressing and completed on time to support mission success.
- Drafted Mission Assurance Implementation Plan to outline the steps by which the MDA Assurance Provision are managed and implemented in TE.
- Established MOA with OTAs on BMDS Data Analysis Working Group to support and facilitate interaction and data on matters concerning testing and assessment.
- Prepared draft Test and Evaluation sections of MDA policy and guidance for software acquisition.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>FY06 Planned Program:</p> <ul style="list-style-type: none">• Completed MDA Directive 5000.2, Target Planning Process Directive, November 8, 2005 to establish long-term planning of target capabilities required for BMDS testing.• Completed Mission Assurance Implementation Plan, November 2005 to outline the steps by which the MDA Assurance Provision are managed and implemented in TE.• BMDS Capability Assessment (BCA) team will update the non-advocate assessment of the BMDS readiness, investigate BMDS performance issues, propose mitigation plans, contribute to BMDS test activity planning, and plan for operational system characterization.• Prepare Target Accreditation Reports for MRTF FT-2, MRTF FT-3, MRTF FT-4, FTM-04-1, FTM-04-2, FTM-04-3, FTM-06-1, FT-04-4, JCTV-1, THAAD FT-3, and THAAD FT-4 to ensure target satisfies mission objectives.• Initiate Target Accreditation Reports for FTM-06-2 and FTT 06-1 to ensure target satisfies mission objectives.• Continue to integrate mission assurance, best practices and lessons learned into test policy, process, and procedures.• Continue communications and coordination with the Service operational test communities as established by the MOA. Fund BMDS Operational Assessment Efforts by the OTA.• Prepare draft RTO Software Acquisition Improvement Plan to comply with MDA policy for compliance with FY2003 NDAA, Section 804, Software Acquisition Process Improvement.• Prepare draft RTO Knowledge Management Plan to ensure TE consciously and comprehensively gathers, organizes, shares, and analyzes its knowledge in terms of resources, documents, and people skills and in such a manner as to effectively leverage MDA enterprise resources. <p>FY07 Planned Program:</p> <ul style="list-style-type: none">• BMDS Capability Assessment (BCA) team will continue to update the non-advocate assessment of the BMDS readiness and investigate BMDS performance issues and propose mitigation plans.• Prepare Target Accreditation Reports for FT-06-4, FTG-06-1, FTG 06-2, FTM 06-3, FTT 06-1, FTT 06-2, FTT 06-3, and FTT 06-4.• Continue to integrate mission assurance and best practices and lessons learned into test policy, processes and procedures.• Continue communications and interaction between the BMDS development community and Operational Test Agencies (OTA). Continue funding BMDS Operational Assessment Efforts.• Continue the development and implementation of test policy, standards, and procedures for creating unified BMD test processes.		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2005	FY 2006	FY 2007
BMDS CTF Core	51,933	58,368	59,672
RDT&E Articles (Quantity)	0	0	0

The BMDS Combined Test Force (CTF) plans, executes, analyzes, and reports all BMD system test events. Efforts to achieve this mission include: integrating elements/components into a comprehensive system test program of flight tests, ground tests and exercise overlays (i.e. war games); allocating system test objectives to system test events in the IMTP; integrating test data for BMDS assessments by the systems engineer, OTAs, and military utility assessment agents; planning and executing the BMDS measurements program; conducting and evaluating BMD lethality testing to assure effective munitions systems are developed against known and postulated threats; directing and coordinating efforts of the Applied Data Analysis Center (ADAC); executing the target characterization program; radar and optical data analysis, and directing the kill assessment program.

FY05 Accomplishments:

a. BMDS Common System Test Support:

- Organized the CTF to conduct BMD System Testing to support verification of BMDS element and component interoperability. Began transition of the CTF to Huntsville.
- Provided Government Personnel at SMDC and SETA support for ongoing test planning and execution activities.
- Organized the Test Configuration Control Board (TCCB), and began placing BMDS system tests under configuration control.
- Drafted and coordinated the BMDS Integrated Master Test Plan (IMTP).
- International Programs:
 - Conducted test planning, test execution, sensor planning & data collection, range integration efforts, and post test analysis for Arrow Caravan #1 Flight Tests in cooperation with the Arrow Program Office and the Israeli Missile Defense Organization.
 - Leveraged the unique skills and tools of our international partners for benefits that can be applied to the US BMDS. Examples of unique tools were the measurement systems fielded by the Canadians (imaging hyper-spectral instruments) and Australians (active and passive HF detection systems).
- Organized the Test Assurance Office to improve test event timelines and mission success.

b. Measurements Program:

- Collected, prioritized, validated and documented requirements for MDA Measurements Program. Allocated requirements to Block 06 tests.
- Conducted test planning, sensor planning, range integration, and design reviews in support of FT 04-2 (CMCM-1) and FT 04-4 (CMCM-2).

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">• Conducted test planning, test execution, and post test analysis of the Long Range Air Launched Target (LRALT) characterization risk reduction flight.• Conducted test planning, test execution, and post test analysis the Short Range Air Launched Target (SRALT) characterization risk reduction flight.• Successfully launched FT04-2, and began analyzing test results.• Conducted test & sensor planning, range integration efforts, and design reviews in support of Medium Range Target (MRT) characterization and risk reduction flight (FT 04-3).• Drafted the Measurements Master Test Plan (MMTP). <p>c. CTF Lethality Program:</p> <ul style="list-style-type: none">• Conducted successful collaborative intercept flight test (PAC-3 DT/OT 12) with the US Army Lower Tier Project Office to characterize the fate of a surrogate chemical agent threat payload.• Began analytical predictions, test planning and target development for collaborative CY 2006 THAAD FTT-03 and FTT-04 intercept tests.• Completed payload and associated instrumentation development for the FT 04-4A (Measurements Program) CTF chemical sub-munition experiment.• Supported development of a revised lethality LFT&E Strategy for THAAD. <p>d. Advanced Data Analysis Center (ODA, RDA, and RDE):</p> <ul style="list-style-type: none">• Supported BMDS data collection objectives, conducted mission planning for FT 04-3, FT04-02, and FT 04-4 performed sensor execution for FT 04-3, FT04-02, and FT04-04, performed data analysis for CMP-4, LRALT, SRALT, MRT, FT04-02, and BMD System Tests, explored phenomenology to improve future BMD systems and new mission areas, and provided characterization and assessment for Measurements and BMDS flight test programs.• Updated the Measurements Master Test Plan (MMTP).• Continued Optical Data Analysis (ODA) and Radar Data Analysis (RDA) groups effort to support BMDS data collection objectives, conduct mission planning for LRALT, SRALT, FT 04-3, and FT04-02, perform sensor execution for CMP-4, LRALT, and SRALT, perform data analysis for CMP-4, LRALT, SRALT, and BMD System Tests, explored phenomenology data gathering opportunities to improve future BMD systems and new mission areas, and provided characterization and assessment for Measurements and BMDS flight test programs.• Continued Radar Data Exploitation (RDE) analysis efforts of all source data collection during foreign flight tests.		

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<ul style="list-style-type: none">• Conducted test planning, test execution, and post test analysis for Medium Range Target (FT 04-3) Characterization of FT 04-3 Risk Reduction Flight. Collected target signature data for new target performance, characterization analysis, and for algorithm development.• Coordinated requirements, sensor planning, data collection, data analysis, and reporting for approximately 4 Tests of Opportunity (TOOs).• Continued to coordinate and revise the BMDS Integrated Master Test Plan (IMTP).• Kill Assessment Program: analyzed data collected from BMDS test events to develop decision tools in order to insert Kill Assessment (KA) decision capabilities into the BMDS Block 2006 C2BMC suite. <p>FY06 Planned Program:</p> <p>a. BMDS Common System Test Support:</p> <ul style="list-style-type: none">• Continue CTF Reengineering efforts and transfer to Huntsville, AL with goal of being Fully Operational Capable (FOC) on 1 Oct 06.• Continue to coordinate, revise and fully coordinate the BMDS Integrated Master Test Plan (IMTP).• Continue to operate and improve the TCCB process to control the content and schedule of BMDS system test events.• Continue to provide the CTF with the SMDC Government and SETA support necessary to plan and execute BMDS system test events.• Provide initial funding to establish the Test Assurance organization within TE to improve test mission success.• Establish the Test Assurance organization and fully staff to improve the BMDS mission success.• Conduct Special Program Tests as opportunities arise.• International Program:<ul style="list-style-type: none">○ Conduct US-UK cooperative passive radar analysis.○ Perform analysis on US-IS DEA joint data. Conduct US-CA spectral data collections and US-AU OTH radar investigations. <p>b. Measurements Program:</p> <ul style="list-style-type: none">• Revise and update the Measurements Master Test Plan (MMTP).• Continue to collect, prioritize, validate, and document requirements for MDA Measurements Program. Allocate requirements to test. <p>c. CTF Lethality Program:</p> <ul style="list-style-type: none">• Continue interface with BMDS element and corporate lethality programs, but with increased authority and responsibility for assuring BMDS lethality testing and assessments are accomplished in accordance with the BMDS Combined Test Force Concept of Operations.• Support tasks to update lethality LFT&E requirements and execute strategy for GMD, Aegis BMD, KEI, ABL and MKV.		

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<ul style="list-style-type: none">• Conduct collaborative intercept flight tests FTT-03 and FTT-04 with the TPO to characterize the fate of a surrogate unitary chemical target payload. Continue analytical predictions, test planning and target development for intercept flight test ATM-48 (PAC-2 GEM) to characterize the fate of a surrogate unitary chemical target payload.• Begin analytical predictions, test planning and target development for two collaborative FY 07 THAAD intercept tests to characterize the fate of a sub-munition target payload. <p>d. Applied Data Analysis Center (ADAC):</p> <ul style="list-style-type: none">• Continue the Advanced Data Analysis Center (ODA, RDA, and RDE groups) effort to support BMDS data collection objectives, conduct mission planning for FT 06-4, perform data analysis for MRT, FT04-02, FT04-04 and BMD System Tests, explore phenomenology to improve future BMD systems and new mission areas, and provide characterization and assessment for Measurements and BMDS flight test programs.• The Kill Assessment (KA) Test Program:<ul style="list-style-type: none">○ Develop, test and validate techniques that are designed to declare the Degree of Kill on BMDS Engagements. This includes developing engineering models and decision tools to support KA decision capability insertion into the BMDS Block 2006 C2BMC suite which include:○ Developing a C2BMC schema with architecture for the BMDS that will identify potential Kill Assessment sensors, identifying kill assessment algorithms, incorporating near-real time Kill Assessment information in the C2BMC system, and displaying real-time information to decision makers.○ Providing sensor support that develops and fields specially designed Kill Assessment sensors including the Kill Assessment Fireball Sensor (KAFS), high speed spectrometers (HSS), and high speed imagers (HSI) that can capture the necessary Kill Assessment data.○ Conducting RV Intercept Signature Kill Assessment (RISK) Model Development to predict optical signatures resulting from target intercepts.○ Performing Hydrocode Model Assessment to determine the utility of hydrocodes to support Kill Assessment. <p>FY07 Planned Program:</p> <p>a. BMDS Common System Test Support:</p> <ul style="list-style-type: none">• Complete transition BMDS test planning and execution to Huntsville. Continue to coordinate and revise the BMDS Integrated Master Test Plan (IMTP).• Continue to operate and improve the TCCB process to control the content of and schedule of BMDS system test events.• Continue to provide SMDC Government and SETA support necessary to plan and execute BMDS system test events.• Transfer the Test Assurance mission support and effort to TE.• Conduct Special Program Tests as opportunities arise.		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">• International Program:<ul style="list-style-type: none">○ Conduct US-UK cooperative passive radar analysis.○ Perform analysis on US-IS DEA joint data.○ Conduct US-CA spectral data collections and US-AU OTH radar investigations.○ Transfer International Policy and Planning within TE to Test Policy and Integration (TEP). b. Measurements Program:<ul style="list-style-type: none">• Update the Measurements Master Test Plan (MMTP). Continue to collect, prioritize, validate, and document requirements for MDA Measurements Program. Allocate requirements to test. c. CTF Lethality Program:<ul style="list-style-type: none">• Support tasks to update lethality LFT&E requirements and execute strategy for GMD, Aegis BMD, KEI, ABL and MKV.• Conduct two collaborative intercept flight tests with the TPO to characterize the fate of a surrogate submunition target payload.• Continue analytical predictions, test planning and execute intercept flight test ATM-48 (PAC-2 GEM) tasks to characterize the response of a surrogate unitary chemical target payload.• Begin analytical predictions, test planning and target development to characterize the fate of surrogate WMD target payloads in two collaborative FY 08 LTPO intercept tests and out-year ABL shoot-down events. d. Applied Data Analysis Center (ADAC):<ul style="list-style-type: none">• The Advanced Data Analysis Center (ODA, RDA, and RDE) effort will continue to support BMDS data collection objectives, conduct mission planning for FT 06-4 and FT 08-2, perform sensor execution for FT 06-4, perform data analysis for FT 06-4 and BMD System Tests, explore phenomenology to improve future BMD systems and new mission areas, and provide characterization and assessment for Measurements and BMDS flight test programs.• Reengineer ADAC. Transfer Data Analysis Functions to CTF Joint Data Analysis Center (JDAC).• Resolve key questions pertaining to bulk chemical target payloads after BMD engagements.• Kill Assessment (KA) Test Program:<ul style="list-style-type: none">• Continue to develop and validate techniques that are designed to declare the Degree of Kill on BMDS Engagements. This includes developing engineering models and decision tools to support KA decision capability insertion into the BMDS Block 2006 C2BMC suite.		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none"> • Develop a C2BMC schema with architecture for the BMDS that will identify potential Kill Assessment sensors, identifying kill assessment algorithms, incorporating near-real time Kill Assessment information in the C2BMC system, and displaying real-time information to decision makers. • Continue to provide sensor support that develops and fields specially designed Kill Assessment sensors including the Kill Assessment Fireball Sensor (KAFS), high speed spectrometers (HSS), and high speed imagers (HSI) that can capture the necessary Kill Assessment data. • Conduct RV Intercept Signature Kill Assessment (RISK) Model Development to predict optical signatures resulting from target intercepts. • Perform Hydrocode Model Assessment to determine the utility of hydrocodes to support Kill Assessment. 			
	FY 2005	FY 2006	FY 2007
Test Resources	165,208	130,619	111,981
RDT&E Articles (Quantity)	0	2	0
<p>The Test Resources program will provide for operations, sustainment, and modernization of the core corporate test and evaluation infrastructure components of the BMDS Test Bed. This includes ranges and instrumentation, airborne sensors, mobile launch platform and ground test facilities to support element- and system-level testing. This program will continue to improve test infrastructure in terms of capability and quantity, as recommended from continuing MDA studies. These improvements build on the existing core test infrastructure to support element and system-level testing.</p> <p>FY05 Accomplishments:</p> <ul style="list-style-type: none"> • Provided level-of-effort funding to ranges (White Sands Missile Range (WSMR), Kauai Test Facility (KTF), Wake Island, Pacific Missile Range Facility (PMRF), Reagan Test Site (RTS), Western Range / Vandenberg Air Force Base (VAFB), Naval Air Warfare Center (NAWC), Kodiak Launch Complex (KLC)) to maintain MDA-unique test facilities and instrumentation for MDA tests. • Continued to operate, maintain and improve airborne sensors instrumentation platforms HALO-I, HALO-II and WASP to support IR measurement data collection for BMDS testing and development activities. • Maintained the MDA-unique ground test facilities, including wind tunnels, space-environment chambers, light gas gun, ladar performance lab, rocket-plume sensor capabilities, and hardware-in-the-loop simulation facility to support component level Hardware in the Loop risk reduction testing. • Used the Pacific Range Support Team (PRST) to provide efficient planning, coordination and management of range resources and infrastructure in support of BMDS Flight Testing throughout the Pacific Test bed. 			

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<ul style="list-style-type: none">• Validated the PRST concept on FT 04-5, a flight test conducted solely with mobile assets for the critical test functions of flight safety, telemetry, test control and communications, and IR data collection. (The PRST concept teams the Pacific Ranges to provide comprehensive test planning and execution support to MDA).• Continued development of the PRST Flight Safety Guide for Range Users that provides a standard process for MDA elements to use when testing at various MDA ranges.• Initiated software development of the Range Safety Modeling Toolkit (RSMT) to provide common safety analysis tools.• Initiated coordination with the Targets Program to develop and qualify common Flight Termination and Range Tracking Systems that will simplify target integration at the ranges.• Maintained the MDA Data Centers Program to provide efficient data archiving, access, distribution and furnish relevant expertise for MDA Mission oriented data.• Awarded follow-on task order to Alaska Aerospace Development Corporation (AADC) to provide for operation and sustainment of the Kodiak Launch Complex (KLC) to support MDA target launches.• Initiated activation of a reserve fleet ship to support MDA as the “Pacific Collector.” The ship will serve as a mobile instrumentation ship to support off-range BMDS testing and increasingly complex test scenarios.• Continued support of the Test and Evaluation Data Analysis Capability (TEDAC) to provide test communications among the MDA ranges and test situational awareness to MDA HQ.• Continued development of the Transportable Telemetry Systems (TTS) to provide ultra high band width telemetry collection, processing, and real time test data transmission capability thereby supporting the data collection requirements of future BMDS missions.• Initiated development of the X-band Transportable Radar (XTR-1) to support off-range BMDS testing and increasingly complex test scenarios.• Initiated upgrade of the Kwajalein Mobile Range Safety System (KMRSS).• Coordinated with OSD test resources community/programs (DTRMC, CTEIP, etc.). Developed agreement on the NP-3D upgrade program to provide three (3) aircraft that will have the capability to support MDA operations.• Maintained and operated the Kauai Test Facility (KTF) to enable the launch of target systems supporting BMD Test Activities. (Congressional Earmark)• Continued Upgrades to PMRF Sensors, Command and Control Systems, Data Analysis Tools, and Range Safety Systems to support BMDS testing. (Congressional Adds)• Characterized advanced technology in the terrestrial neutron environments which allows simulation of unique BMD Environments at the Indiana University Cyclotron Facility. (Congressional Add)		

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<p>FY06 Planned Program: RDT&E Articles: Delivery of Two (2) Transportable Telemetry Systems</p> <ul style="list-style-type: none"> • Develop, maintain, integrate and upgrade MDA unique range facilities and instrumentation at the following ranges in accordance with DTRMC Guidance: White Sands Missile Range (WSMR), Kauai Test Facility (KTF), Wake Island, Pacific Missile Range Facility (PMRF), Reagan Test Site (RTS), Western Range / Vandenberg Air Force Base (VAFB), Naval Air Warfare Center (NAWC), and the Kodiak Launch Complex (KLC). • Operate High Altitude Observatory II (HALO-II), WASP, High Altitude Observatory (HALO-I) for data collection services and services of BMD Flight Test. • Maintain and upgrade MDA unique Ground Test Facilities to support all the BMDS developmental program hardware and software testing. These facilities provide hardware in the loop capability, threat signature measurement capability, and sensor calibration standards. • Upgrade the Hypervelocity Ballistic Range G Light Gas Gun at AEDC to provide higher fidelity projectiles in support of BMDS Live Fire Test & Evaluation (LFT&E). • Use the Pacific Range Support Team (PRST) to provide efficient planning, coordination and management of range resources and infrastructure in support of BMDS Flight Testing throughout the Pacific Test bed. • Complete development of the PRST Flight Safety Guide for Range Users that provides a standard process for MDA elements to use when testing at various MDA ranges. • Complete development and independent verification and validation (IV&V) of the Range Safety Modeling Toolkit (RSMT) to provide common safety analysis tools. • Continue coordinating with the Targets Program to develop and qualify common Flight Termination and Range Tracking Systems that will simplify target integration at the ranges. • Recommend innovative solutions to mitigate Range Safety Officer shortfalls through the PRST's Range Safety Augmentation Program (RSAP). • Provide centralized data management, archival and distribution services to reduce the risks and cost of BMDS Block Development and Operational Deployment. The Data Centers comprise MDA's official archive for all MDA mission related scientific and technical data. These centers include: Advanced Missile Signature Center, Ballistic Missile Defense System Integration Data Center, Missile Defense Data Center, and Naval Surface Warfare Center. • Complete activation of the Pacific Collector to support off-range BMDS testing and increasingly complex test scenarios. • Continue support of the Test and Evaluation Data Analysis Capability (TEDAC) to provide test communications among the MDA ranges and test situational awareness to MDA HQ. 		

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<ul style="list-style-type: none">• Complete development and transition to test operations of two Transportable Telemetry Systems (TTS) which provides long range missile telemetry acquisition, processing and archiving capability.• Continue development of the X-band Transportable Radar (XTR-1) to support off-range BMDS testing and increasingly complex test scenarios.• Complete upgrade of the Kwajalein Mobile Range Safety System (KMRSS).• Sustain the Mobile Range Safety System (MRSS) at PMRF.• Coordinate with OSD test resources community/programs (DTRMC, CTEIP, etc.)• Initiate the NP-3 Upgrades in conjunction with OSD/CTEIP and the Navy to support off-range BMDS testing and increasingly complex test scenarios.• Develop and Upgrade PMRF Sensors, Command and Control Systems, Data Analysis Tools, and Range Safety Systems. (Congressional Adds)• Maintain and operate the Kauai Test Facility (KTF) to enable the launch of target systems supporting BMD Test Activities. (Congressional Earmark)• Characterize advanced technology in the terrestrial neutron environments which allows simulation of unique BMD Environments at the Indiana University Cyclotron Facility. (Congressional Add) <p>FY07 Planned Program:</p> <ul style="list-style-type: none">• Develop, maintain, integrate and upgrade MDA unique range facilities and instrumentation at the following ranges in accordance with DTRMC guidance: White Sands Missile Range (WSMR), Kauai Test Facility (KTF), Wake Island, Pacific Missile Range Facility (PMRF), Reagan Test Site (RTS), Western Range / Vandenberg Air Force Base (VAFB), and the Kodiak Launch Complex (KLC).• Operate High Altitude Observatory II (HALO-II), Wide Body Airborne Sensor Platform (WASP), High Altitude Observatory (HALO-I) for data collection services and services of BMD Flight Test.• Maintain and upgrade MDA unique Ground Test Facilities to support all the BMDS developmental program hardware and software testing. These facilities provide hardware in the loop capability, threat signature measurement capability, and sensor calibration standards.• Use the Pacific Range Support Team (PRST) to provide efficient planning, coordination and management of range resources and infrastructure in support of BMDS Flight Testing throughout the Pacific Test bed.• Continue coordinating with the Targets Program to develop and qualify common Flight Termination and Range Tracking Systems that will simplify target integration at the ranges.• Provide centralized data management, archival and distribution services to reduce the risks and cost of BMDS Block Development and Operational Deployment. The Data Centers comprise MDA's official archive for all MDA mission related scientific and technical data. These		

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centers include: Advanced Missile Signature Center, Ballistic Missile Defense System Integration Data Center, Missile Defense Data Center, and Navy Surface Warfare Center.

- Sustain the Pacific Collector to support off-range BMDS testing and increasingly complex test scenarios.
- Continue support of the Test and Evaluation Data Analysis Capability (TEDAC) to provide test communications among the MDA ranges and test situational awareness to MDA HQ.
- Continue development of the X-band Transportable Radar (XTR-1) to support off-range BMDS testing and increasingly complex test scenarios.
- Coordinate with OSD test resources community/programs (DTRMC, CTEIP, etc.).
- Continue the NP-3D Upgrades in conjunction with OSD/CTEIP and the Navy to support off-range BMDS testing and increasingly complex test scenarios.
- Sustain the Kwajalein Mobile Range Safety System (KMRSS).
- Sustain the Mobile Range Safety System (MRSS) at PMRF.
- Maintain and operate the Kauai Test Facility (KTF) to enable the launch of target systems supporting BMD Test Activities.

	FY 2005	FY 2006	FY 2007
Facilities, Siting & Environmental	3,240	3,433	3,827
RDT&E Articles (Quantity)	0	0	0

The Facilities, Siting and Environmental (FS&E) Program is comprised of two areas: the Civil Engineering Division and the Environmental Management Division. The Civil Engineering Division is the functional area for facility siting, real property acquisition, and facility sustainment and support for the BMDS. The Civil Engineering Division also oversees facility acquisition through the Military Construction (MILCON) and RDT&E construction programs. The Environmental Management Division is the functional area for BMDS environmental compliance, pollution prevention, NEPA process support, and other environmental efforts. The Environmental Management Division ensures environmental compliance of all BMDS activities with federal, state, local, DOD and international law, treaties and regulations.

FY05 Accomplishments:

The Civil Engineering Division:

- Provided oversight for real property acquisition of the Military Construction (MILCON) and RDT&E construction programs.
- Managed the reprogramming, design and execution award of the Von Braun Complex II MILCON project on Redstone Arsenal, AL
- Supported the MDA facility requirements in the 2005 BRAC process including a new facility on Redstone Arsenal, AL
- Reorganized the Real Property Facility Project Validation Working Group (PVWG) under the MDA Facility Board (FB)

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<ul style="list-style-type: none"> • Processed FY07 MILCON and RDT&E Facility projects requirement through the PVWG and FB • Supported the siting and facility requirements development for the FBX-T Radar at an OCONUS location • Drafted FY06 facility budget documentation and supported actions to obtain Congressional funding for a FY06 MILCON Emergency Services Facility on Meck Island for MDA test support • Obtained facility work required to support MDA FTM 06-5 test on Wake Island • Supported actions related to completing the THAAD MILCON project at PMRF, HI • Supported actions related to the completion of the Missile Defense System Test Bed construction program in Alaska and California <p>The Environmental Management Division:</p> <ul style="list-style-type: none"> • Ensured that all MDA BMDS testing activities were conducted in compliance with all applicable federal, state, local, DOD and international law, treaties and regulations concerning environmental compliance. • Provided guidance and supported MDA's compliance with the National Environmental Policy Act (NEPA), environmental management system requirements of E.O. 13148, and other environmental management efforts, including green procurement, pollution prevention, and permitting. • Prepared / provided oversight on Records of Environmental Consideration (REC) for the following activities/events: <ul style="list-style-type: none"> ○ Ground-to-Air Lasing at WSMR ○ Space Tracking and Surveillance System (STSS) Block 2006 Launch ○ Cobra Dane LRLALT (FT04-5) (Overarching REC) ○ Critical Measurements & Countermeasures (FT-04-4) ○ FTM 04-2, 04-3 and JFM-1 (Record of Categorical Exclusion) ○ Ground-Based Midcourse Defense Entry Control Facility Relocation at Fort Greely, Alaska ○ MDA-510, Telemetry Building Extension at the Pacific Missile Range Facility ○ Passive Roto-plane testing by Airborne Laser at WSMR ○ THAAD Intercept Debris Measurements Program ○ Early Launch Detection & Typing Experiment • Prepared / provided oversight on Environmental Assessments for the following activities / events: <ul style="list-style-type: none"> ○ Proposed THAAD Missile Project, Anniston Army Depot, AL ○ Fort Greely Installation ○ Ground Based Midcourse Defense (GMD) Sea-Based X-Band Radar (SBX) Placement and Operation Adak, Alaska (Draft) ○ Enhanced Laser and Range Operations at the High Energy Laser System Test Facility (HELSTF) ○ MDA Mobile Sensors 		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">○ MUDPACK II Lethality Experiment○ Orbital/Sub-Orbital Program (Draft)○ Small Targets Launch Site at VAFB (Draft)● Prepared the MDA Programmatic Environmental Impact Statement (PEIS) for the Ballistic Missile Defense System (BMDS) - Draft and holding four public hearings in CA, AK, HI, and DC● Established HQ policy for environmental compliance and providing quality assurance and management oversight for all MDA environmental compliance matters● Prepared an Strategic Plan for Environmental Management and Documented MDA's Environmental Management System (EMS)● Coordinated air quality permitting issues with Vandenberg Air Force Base and Regulators for the FBX-T Radar <p>FY06 Planned Program:</p> <p>The Civil Engineering Division:</p> <ul style="list-style-type: none">● Draft FY07 facility budget documentation and supported actions to obtain Congressional funding for a FY07 MILCON Life Safety Upgrade project on Meck Island for MDA test support● Oversee the construction execution of the Von Braun Complex II MILCON project on Redstone Arsenal, AL● Oversee the construction award of the FY06 facility MILCON Emergency Services Facility on Meck Island● Support obtaining OSD approval and Congressional notification for establishment of a Flexible Target Family Single Integration Facility Complex● Oversee establishment of facilities required for an OCONUS FBX-T Radar <p>The Environmental Management Division:</p> <ul style="list-style-type: none">● Complete the BMDS Programmatic Environmental Impact Statement● Complete the environmental review for the FBX-T radar OCONUS● Prepare / provide oversight on the following EAs<ul style="list-style-type: none">○ Orbital/Sub-Orbital Program○ Small Targets Launch Site○ ABL Debris○ Flexible Target Family● Complete numerous RECs for projects including the STSS, Thunderball, Big Crow, and FT-06-4.		

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FY07 Planned Program:

The Facilities, Siting and Environmental Program will continue to provide facility siting and environmental compliance support for the BMDS.

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941

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	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

The RTO directs various executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDCs and other MDA programs to execute the various diverse efforts within the BMDS test program. Based on the specific effort / activity being conducted, acquired, or maintained, these executing agents use various acquisition strategies that conform to their respective headquarters regulations. The executing agents strive to use contracting strategies that provide the flexibility needed to test and assess to BMDS in a capabilities-based environment.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Product Development								

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Test Policy and Integration								
BCA	Various	Various/ NJ, CA, MD, MA	8,622	9,315	1Q	9,641	1Q	27,578
Operational Test Agency Participation in System Test	Various	OTAs/ Various	5,556	5,899	1Q	11,213	1Q	22,668
Target Certification	Various	USASMDC/ Huntsville, AL	575	598	1Q	622	1Q	1,795
BMDS CTF Core								

Remarks

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis						Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Optical Data Analysis	Various	USASMDC, HANSCOM AFB & NAVSEA/ Huntsville, AL, MA & Crystal City, VA	9,083	5,000	1Q	5,850	1Q	19,933
Radar Data Analysis	Various	USASMDC, NAVSEA & HANSCOM AFB/ Huntsville, AL, Crystal City, VA & MA	8,983	4,350	1Q	4,800	1Q	18,133
Lethality	Various	USASMDC / Huntsville, AL	8,205	2,841	1Q	2,830	1Q	13,876
Kill Assessment	Various	USASMDC / Huntsville, AL	6,590	3,889	1Q	3,792	1Q	14,271
International Programs	Various	USASMDC, HANSCOM AFB, WRIGHT PATTERSON AFB & NAVSE/ Huntsville, AL, MA, OH & Crystal City, VA	2,049	1,124	1Q	1,178	1Q	4,351
Target Characterization	Various	USASMDC / Huntsville, AL	8,797	0	N/A	0	N/A	8,797
Special Programs Tests	Various	MDA/ Washington, D.C.	212	5,000	1Q	3,600	1Q	8,812
CMP-4	Various	USASMDC / Huntsville, AL	16,505	0	N/A	0	N/A	16,505

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/Oblg Date	FY 2007 Cost	FY 2007 Award/Oblg Date	Total Cost
Corporate Data Collection	Various	Various including Sandia, APL-JHU, MITLL & USAMCOM	3,920	0	N/A	0	N/A	3,920
TPS-X	Various	Various including NSWC-DD, SPAWAR, NSWC-PHD/PMRF	2,425	0	N/A	0	N/A	2,425
Radar Exploitation	Various	USASMDC/ Huntsville, AL	5,365	2,892	1Q	2,993	1Q	11,250
FT 04-2 & FT 04-4	Various	USASMDC / Huntsville, AL	84,549	0	1Q	0	1Q	84,549
Measurements Strategic Planning	Various	MDA & USASMDC/ Washington, D.C. & Huntsville, AL	0	1,000	1Q	1,000	1Q	2,000
BMDS Strategic Planning	Various	USASMDC & MDA / Huntsville, AL & Washington, D.C.	0	5,236	1Q	5,286	1Q	10,522
Capability Requirements Demo	Various	JNIC/ Colorado Springs, CO	0	330	1Q	0	N/A	330
Test Configuration Control Board	Various	MDA/ Washington, D.C.	0	2,742	1Q	3,000	1Q	5,742
Test Assurance Directorate	Various	MDA/ Washington, D.C.	0	2,970	1Q	3,495	1Q	6,465
Test Resources								
Ground Test Facilities	Various	Army, Air Force/ AL, FL, MD, TN,	16,655	7,468	1Q	7,794	1Q	31,917

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Ranges and Instrumentation	Various	Various/ CA, HI, NM, Marshall Is, Alaska	64,978	63,794	1Q	63,655	1Q	192,427
Airborne Sensors	C/CPAF	L3 Communications/ CA, OK, NM	37,118	25,395	1Q	26,258	1Q	88,771
PMRF Upgrades (Congressional Adds)	Various	Various / HI	33,329	15,940	N/A	0	N/A	49,269
Environmental Radiation Effects Simulation (Congressional Add)	Various	Indiana U, Bloomington, IN	1,450	1,800	N/A	0	N/A	3,250
Data Centers	Various	Various, TN, CO, AL, CA	10,143	9,585	1Q	7,560	1Q	27,288
Facilities, Siting & Environmental								
Facilities & Siting	Various	Various	0	0	N/A	0	N/A	
Environmental Compliance	Various	Various	0	0	N/A	0	N/A	
Subtotal Test and Evaluation			335,109	177,168		164,567		676844

Remarks

Test Resources:

- Ground Test Facility (GTF) Funding is issued from MDA to the Army and Air Force. The services provide funds to the Army Missile Optical Range (AMOR) in AL, the Kinetic Hardware In The Loop Simulator in FL, and the Arnold Engineering Development Center in TN. Each Facility then places funds on contract and/or retains funding to support on-site personnel.
- Ranges and Instrumentation funding is distributed to executing agents through the services and issued directly from MDA. The Army (SMDC) issues MDA funds for the Mobile Launch Platform (MLP) and MIPRs funds to the Reagan Test Site in the Marshall Islands for range operations, instrumentation upgrades, and various PRST efforts. The Air Force issues funding to Wake Island for test operations support. The remaining funds are issued directly from MDA. Funds are MIPRed to members of the Pacific Range Support Team (PRST) (Patrick AFB, Vandenberg AFB, Pacific Missile Range Facility, Naval Air Warfare Center/Patuxent River & Pt Mugu, White Sands Missile Range, and Sandia National Labs), MIT/LL (Airborne Sensor support, Test Infrastructure support, Flexible Target Family support, and XTR-1 development), NRL (BMDS

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Test Communications and NP-3D upgrades), and DOT/Maritime Administration (Texas Clipper Activation). Funds are placed directly on an MDA contract with the Alaska Aerospace Development Corporation (AADC) for Kodiak Launch Complex Operations and Sustainment.

- PMRF Upgrades is a Congressional Add. Funds are issue from MDA to the Navy. The Navy provides funding to various contractors providing support to PMRF.
- Environmental Radiation Effects Simulation is a Congressional Add.
- Data Center Funding is issued from MDA to the Army, Air Force, Navy, and the Joint National Integration Center (JNIC). The services provide funds to the Army Missile Signature Center in TN, Naval Surface Warfare/Weapons Center (Corona) in CA, Missile Defense Data Center in AL, and the BMDS Integration Data Center in CO. The Data Centers place the funds on contract and/or retain funding to support on-site personnel.

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Test Policy and Integration								
TE Government Salaries	TM	Wash, DC	5,258	5,500	1Q	5,720	1Q	16,478
Support Contracts	C/FFP	TASC, SPARTA/ Arlington, VA	4,463	4,746	1Q	4,828	1Q	14,037
TE Travel	TM		586	544	1Q	558	1Q	1,688
SMDC Government Salaries	TM	USASMDC/ Huntsville, AL	140	145	1Q	151	1Q	436
BMDS CTF Core								
SMDC Government Salaries	TM	USASMDC/ Huntsville, AL	7,685	5,154	1Q	5,254	1Q	18,093
Support Contracts	C/FFP	Various/ TASC, SPARTA, RNB Arlington, VA	26,429	15,840	1Q	16,594	1Q	58,863
Test Resources								
SMDC Government Salaries	TM	USASMDC/ Huntsville, AL	501	923	1Q	919	1Q	2,343

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/Oblg Date	FY 2007 Cost	FY 2007 Award/Oblg Date	Total Cost
Support Contracts	C/FFP	Northrop Grumman/ Arlington, VA	5,432	5,816	1Q	6,107	1Q	17,355
Facilities, Siting & Environmental								
Support Contracts	C/FFP	ICF & SciComm/ VA & MD	3,240	3,331	1Q	3,515	1Q	10,086
Subtotal Management Services			53,734	41,999		43,646		139,379

Remarks

Project Total Cost			388,843	219,167		208,213		816,223
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Remarks

The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified.

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Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Aegis BMD Cooperative Research Program																																
JCTV-1					◆																											
ARROW System Improvement Program																																
AST-10					◆																											
AST-11								◆																								
AST-12												◆																				
AST-13																◆																
ABL																																
First Flight	◆																															
First Light	◆																															
System Ground Tests																																
IGT-3	▼																															
IGT-4b	▼																															
WG 04-1 (IMD-04.5)	▼																															
GT 04-1a (IGT-5)		▼																														
GT 04-2 (DGT-1)		▼																														
GT 04-5 (MDIE 05a)			▼																													

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▼	System Level Test (complete)
▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
▼	System Level Test (planned)
▲	Planned Activity

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APPROPRIATION/BUDGET ACTIVITY
RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Ground Tests																																
WG 04-2 (IMD 5-1)			▼																													
WG 04-3 (IMD-5.2)			▼																													
WG 04-4 (IMD-5.3)				▼																												
DGT 04-2a Phase 1								▼																								
IGT 04-1a								▼																								
WG 04-5 (IMD-5.4)								▼																								
DGT 04-2a Phase 2												▼																				
GTX 06-1												▼																				
IGT 04-1b												▼																				
Amalgam Phantom 06																▼																
DGT 04-2b																▼																
GT 04-1b (IGT-5)																▼																
GT 04-2b																▼																
GTX 06-2																▼																
GTD 06-1																																

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Ground Tests																																
GTI 06-1								▽																								
GTX 06-3									▽																							
Terminal Fury									▽																							
Vigilant Shield 06									▽																							
GTI 06-2											▽																					
Amalgam Phantom 07												▽																				
GTD 06-2												▽																				
GTX 06-4												▽																				
GTX 06-5													▽																			
GTD 06-3																▽																
GTI 06-3																▽																
Terminal Fury 08																▽																
Vigilant Shield 08																◇																
GTX 08-1																	▽															
Amalgam Phantom 08																				▽												

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Ground Tests																												
GTX 08-2															▽													
GTX 08-3															▽													
GTI 08-1																												
Terminal Fury 09																												
Vigilant Shield 09																												
GTD 08-1																												
GTX 08-4																												
Amalgam Phantom 09																												
GTX 08-5																												
GTX 08-6																												
GTI 08-2																												
Terminal Fury 10																												
Vigilant Shield 10																												
GTD 08-2																												
GTX 10-1																												

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
ATM-46					▼																											
FT-1					◆																											
FTM 04-2					◆																											
FTT-01					◆																											
PAC-3: 2-3					◆																											
FT 04-1						▼																										
FTG-2								◆																								
FTM 06-1								▼																								
FTT-02								◆																								
FTT-03								◆																								
P6-2								◆																								
P6-4								◆																								
FT 06-1												▼																				
FTG-3												▼																				
FTT-04												▼																				
N FIRE-2A												◆																				

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2006

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
16-2									◆																							
ATM-48									◆																							
FT 06-2									◆																							
FTG-4									▽																							
FTM 06-2									▽																							
FTT-05									◆																							
P6L-2									◆																							
P6L-3									◆																							
16-3													◆																			
FTG 06-1													◆																			
FTM 06-5													▽																			
FTT 06-1													◆																			
(PAC) 7-2																																
FTM 06-3													◆																			
FTT 06-2																																
FTT 06-3																																

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2006

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
FTT 06-4																																
(PAC) 7-3																																
FT 06-7 (TMDD-1)																																
FT 06-8 (SMDD-1)																																
FT 08-1 (RDC)																																
FTG 06-2																																
FTM 06-4																																
FTT 06-5																																
JBMD-1																																
P6X-2																																
P6X-4																																
FT 08-2 (TMDD-2)																																
FTG 06-3																																
FT 08-3 (SMDD-2)																																
FTG 08-1																																
FTM 08-1																																

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2006

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
FTT 06-6																▽																
FT 08-4 (RDC)																▽																
FTL 08-1																▽																
FTT 08-1																▽																
FTG 08-3																				▽												
FTT 08-2																				▽												
FT 08-6 (RDC)																								▽								
FTT 08-3																								▽								
FTL 08-2																												▽				
FTM 08-2																												▽				
FT 08-7 (RDC)																																▽
FTG 08-5																																▽
FTT 08-4																																▽
FT 08-8 (STSS)																																▽
FTG 10-1																																▽

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Flight Tests																												
FT 10-5 (RDC)																												▽
FTG 10-5																												▽
FTT 10-4																												▽
Measurement Tests																												
FT 04-2 (CMCM-1)				▲																								
FT 04-4 (CMCM-2)							▲																					
FT 06-4 (CMCM-4)															▲													
FT 08-5 (CMCM-8)																										▲		
Glory Trips (USAF Operational)/Potential BMDS Tests																												
GT-188		▽																										
GT-187				▲																								
GT-189				▽																								
SERV-2				▽																								
SERV-3							▲																					
GT-190							▲																					
GT-191							▲																					

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▽	System Level Test (complete)
▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
▽	System Level Test (planned)
▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Glory Trips (USAF Operational)/Potential BMDS Tests																												
GT-192								▲																				
SERV-4								▲																				
GT-193												▽																
GT-194												▽																
GT-196												▽																
GT-195												▽																
Environmental Planning																												
PEIS Completion								▲																				
Test Asset Upgrades																												
WASP Upgrade																												
ABS Contract Award																												
Major Maint. MLP																												
TTS IOC																												
NP3 Upgrades																												
X-Band Trans Radar (XTR-1) Complete																												
Legend																												
▲ Significant Event (complete) ★ Milestone Decision (complete) ◆ Element Test (complete) ▼ System Level Test (complete) ▲-▲ Complete Activity														▲ Significant Event (planned) ☆ Milestone Decision (planned) ◇ Element Test (planned) ▽ System Level Test (planned) ▲-▲ Planned Activity														

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Aegis BMD Cooperative Research Program							
JCTV-1		2Q					
ARROW System Improvement Program							
AST-10		1Q					
AST-11		3Q					
AST-12			1Q				
AST-13			4Q				
ABL							
First Flight	1Q						
First Light	1Q						
System Ground Tests							
IGT-3	1Q						
IGT-4b	1Q						
WG 04-1 (IMD-04.5)	1Q						
GT 04-1a (IGT-5)	2Q						
GT 04-2 (DGT-1)	2Q						
GT 04-5 (MDIE 05a)	3Q						
WG 04-2 (IMD 5-1)	3Q						
WG 04-3 (IMD-5.2)	3Q						
WG 04-4 (IMD-5.3)	4Q						
DGT 04-2a Phase 1		1Q					
IGT 04-1a		1Q					
WG 04-5 (IMD-5.4)		1Q					
DGT 04-2a Phase 2		2Q					
GTX 06-1		2Q					
IGT 04-1b		2Q					
Amalgam Phantom 06		3Q					
DGT 04-2b		3Q					
GT 04-1b (IGT-5)		3Q					
GT 04-2b		3Q					
GTX 06-2		3Q					

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
GTD 06-1		4Q					
GTI 06-1		4Q					
GTX 06-3			1Q				
Terminal Fury			1Q				
Vigilant Shield 06			1Q				
GTI 06-2			2Q				
Amalgam Phantom 07			3Q				
GTD 06-2			3Q				
GTX 06-4			3Q				
GTX 06-5			4Q				
GTD 06-3				1Q			
GTI 06-3				1Q			
Terminal Fury 08				1Q			
Vigilant Shield 08				1Q			
GTX 08-1				2Q			
Amalgam Phantom 08				3Q			
GTX 08-2				3Q			
GTX 08-3				4Q			
GTI 08-1					1Q		
Terminal Fury 09					1Q		
Vigilant Shield 09					1Q		
GTD 08-1					2Q		
GTX 08-4					2Q		
Amalgam Phantom 09					3Q		
GTX 08-5					3Q		
GTX 08-6					4Q		
GTI 08-2						1Q	
Terminal Fury 10						1Q	1Q
Vigilant Shield 10						1Q	
GTD 08-2						2Q	
GTX 10-1						2Q	

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Amalgam Phantom 10						3Q	
GTX 10-2						3Q	
GTX 10-3						4Q	
GTI 10-1							1Q
Vigilant Shield 11							1Q
GTD 10-1							2Q
GTX 10-4							2Q
Amalgam Phantom 11							3Q
GTX 10-5							3Q
GTX 10-6							4Q
System Flight Tests							
IFT-13c	1Q						
FTM 04-1	2Q						
IFT-14	2Q						
PAC-2 GEM: 2-1	2Q						
FT 04-5 (Cobra Dane LRALT)	4Q						
PAC-3: 2-2	4Q						
ATM-46		1Q					
FT-1		1Q					
FTM 04-2		1Q					
FTT-01		1Q					
PAC-3: 2-3		1Q					
FT 04-1		2Q					
FTG-2		3Q					
FTM 06-1		3Q					
FTT-02		3Q					
FTT-03		3Q					
P6-2		3Q					
P6-4		3Q					
FT 06-1		4Q					
FTG-3		4Q					

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FTT-04		4Q					
N FIRE-2A		4Q					
16-2			1Q				
ATM-48			1Q				
FT 06-2			1Q				
FTG-4			1Q				
FTM 06-2			1Q				
FTT-05			1Q				
P6L-2			1Q				
P6L-3			1Q				
16-3			2Q				
FTG 06-1			2Q				
FTM 06-5			2Q				
FTT 06-1			2Q				
(PAC) 7-2			3Q				
FTM 06-3			3Q				
FTT 06-2			3Q				
FTT 06-3			4Q				
FTT 06-4			4Q				
(PAC) 7-3				1Q			
FT 06-7 (TMDD-1)				1Q			
FT 06-8 (SMDD-1)				1Q			
FT 08-1 (RDC)				1Q			
FTG 06-2				1Q			
FTM 06-4				1Q			
FTT 06-5				1Q			
JBMD-1				1Q			
P6X-2				1Q			
P6X-4				1Q			
FT 08-2 (TMDD-2)				2Q			
FTG 06-3				2Q			

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FT 08-3 (SMDD-2)				3Q			
FTG 08-1				3Q			
FTM 08-1				3Q			
FTT 06-6				3Q			
FT 08-4 (RDC)				4Q			
FTL 08-1				4Q			
FTT 08-1				4Q			
FTG 08-3					1Q		
FTT 08-2					1Q		
FT 08-6 (RDC)					2Q		
FTT 08-3					2Q		
FTG 08-4					3Q		
FTL 08-2					3Q		
FTM 08-2					3Q		
FT 08-7 (RDC)					4Q		
FTG 08-5					4Q		
FTT 08-4					4Q		
FT 08-8 (STSS)						1Q	
FTG 10-1						2Q	
FTL 10-1						2Q	
FTT 10-1						2Q	
FT 10-1 (RDC)						3Q	
FT 10-2 (STSS)						3Q	
FTM 10-1						3Q	
FTG 10-2						4Q	
FTL 10-2						4Q	
FTT 10-2						4Q	
FTG 10-3							1Q
FTL 10-3							1Q
FT 10-4 (STSS)							2Q
FTT 10-3							2Q

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FTG 10-4							3Q
FTL 10-4							3Q
FTM 10-2							3Q
FT 10-5 (RDC)							4Q
FTG 10-5							4Q
FTT 10-4							4Q
Measurement Tests							
FT 04-2 (CMCM-1)	4Q						
FT 04-4 (CMCM-2)		3Q					
FT 06-4 (CMCM-4)				2Q			
FT 08-5 (CMCM-8)						2Q	
Glory Trips (USAF Operational)/Potential BMDS Tests							
GT-188	2Q						
GT-187	4Q						
GT-189	4Q						
SERV-2	4Q						
SERV-3		2Q					
GT-190		3Q					
GT-191		3Q					
GT-192		4Q					
SERV-4		4Q					
GT-193			2Q				
GT-194			3Q				
GT-196			3Q				
GT-195			4Q				
Environmental Planning							
PEIS Completion		3Q					
Test Asset Upgrades							
WASP Upgrade	2Q-3Q						
ABS Contract Award	3Q-4Q						

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
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Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Major Maint. MLP	3Q-4Q						
TTS IOC		1Q-3Q					
NP3 Upgrades			1Q-4Q	1Q-4Q	1Q-4Q		
X-Band Trans Radar (XTR-1) Complete				2Q			

Element participation in system test events is funded within the respective element budget.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0704 Test & Evaluation Block 2004	140,456	0	0	0	0	0	0
RDT&E Articles Qty	4	0	0	0	0	0	0

Note: FY05 RDT&E Test Articles: Integrate Launch Vehicles and Payloads to produce two (2) test articles for FT 04-2 & two (2) for FT 04-4.

A. Mission Description and Budget Item Justification

The BMDS CTF Block 2004 Test and Evaluation Program funded system-level flight tests (BMDS FTs), Measurements Tests, Ground Tests (BMDS GTs) and Missile Defense Integration Exercises (MDIEs), and Integrated Missile Defense (IMD) Wargames. This project conducted BMD System Tests to support verification of achieved BMDS block capability and to support the verification and anchoring of Models and Simulations, and planning for Block 2006 test events. These System Tests examined the capability of the BMDS to detect, track, and engage targets. BMDS Ground Tests demonstrated integration, functionality, and operations of the BMDS in environments that are repeatable and provide a significant number of data points to augment flight test results. Ground test events were conducted to support characterization and verification of the Block 2004 capability and planning for Block 2006 Ground tests. This project also provided analysis of each System Test event through the Joint Analysis Team (JAT). Critical Measurements and Countermeasure (CMCM) flight tests are also funded under this project (FY05 only), but are managed as part of the Measurements Program. CMCMs are dedicated flight tests which provide a venue for risk reduction for BMDS Block Testing, addressing phenomenology, countermeasures, and counter-countermeasures requirements, and providing critical measurements to support development and validation of algorithms, modeling and simulation, discrimination, and new technology demonstrations. CMCMs provide test venues and augment various MDA & Element test capabilities.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Flight Tests	24,331	0	0
RDT&E Articles (Quantity)	0	0	0

The BMDS Combined Test Force (CTF) plans, executes, analyzes, and reports all BMD system test events to demonstrate integrated BMDS capability and address critical measurements for growth and capability.

FY05 Accomplishments:

- Planned and supported execution of BMD System Tests; IFT-13C, IFT-14, FT 04-3, SERV-2, GT-189, FT 04-5, FTM 04-1.
- Conducted post test data analysis on FM-6, GT-185, IFT-13C, IFT-14, FT 04-3, SERV-2, GT-189, FT04-5, FTM 04-1. Test resulted support BMD Capability Verification and Assessment.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none"> Continued to populate the BMDS Characterization Data Base with the latest test data inputs to support assessments by Systems Engineering, JTAMDO/STRATCOMMS and OTAs. <p>FY06 Accomplishment:</p> <ul style="list-style-type: none"> Planned and supported execution of BMD System Test PATRIOT PAC-2 GEM ATM-46, FTM 04-2, FTT-1 and GMD FT-1. (FY05 Tests that slipped into FY06). 			
	FY 2005	FY 2006	FY 2007
Ground Tests	15,705	0	0
RDT&E Articles (Quantity)	0	0	0
<p>The BMDS CTF plans, executes, and analyses all BMD system ground tests to demonstrate integrated BMDS capability and address critical measurements for growth and capability.</p> <p>FY05 Accomplishments:</p> <ul style="list-style-type: none"> Conducted test planning for GT 04-1, GT 04-2, GT 04-5 and GT 04-6. Executed and conducted Post Test Analysis of GT 04-5. Analysis provided verification feedback to the developers for system improvement. Performed post test data analysis of MDIE 04b, IGT-4a, IGT-4b, IGT-3. Note: GT 04-1 and GT04-2 were slipped into FY06, because of system maturity issues. GT 04-6 was canceled because of schedule conflicts with the GMD and C2BMC system simulation laboratories (ISTC-1 and BITC). These labs were not available for BMDS system testing because they were needed to support element developmental test events. Successfully conducted and executed WG 04-1, WG 04-2, WG 04-3, WG 04-4 and WG 04-5. Performed Post Test Analysis of IMD 4.4a, IMD 4.4b, WG 04-1, WG 04-2, WG 04-3 and WG 04-4. Conducted initial planning for GTI 06-1. <p>FY06 Accomplishments/Planned Program:</p> <ul style="list-style-type: none"> Provide support for a Ground Test Laboratory build-out to provide a BMDS Integration and Test Center (BITC) capability dedicated to Ground Test activities. This will alleviate one of the problems that led to GT 04-6 cancellation. Conduct test planning for GT 06-1 to transfer Block 2004 test cases from GT 04-6. Conduct Post Test Analysis of GT 04-1 and GT 04-2. 			

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none"> Conducted WG04-5 (completion slipped from FY05 to FY06). 			
	FY 2005	FY 2006	FY 2007
Measurements Tests	100,420	0	0
RDT&E Articles (Quantity)	4	0	0
<p>The BMDS CTF plans and executes the BMDS measurements program by providing data products that support block characterization, modeling and simulation validation, phenomenology, algorithm development, and new technology developments. These critical measurements are conducted for block development and to characterize threats and countermeasures.</p> <p>FY05 Accomplishments: RDT&E Articles: Integrated and delivered two (2) test articles for FT 04-2 (CMCM-1) & two (2) for FT 04-4 (CMCM-2).</p> <ul style="list-style-type: none"> Designed and planned FT 04-2 & FT 04-4 to support: Countermeasures/Counter-Countermeasures (CM/CCM) characterization, M&S validation, algorithm development & testing, technologies, CONOPS, and to address other MDA System Engineering CM/CCM focus areas. Conducted and executed (FT 04-2 CMCM-1 A&B) two-shot, guided, short range campaign.. Completed post test analysis for CMP-4A&B campaign. Initiated test planning, sensor planning, range integration and design reviews of FT 04-4 (CMCM-2 A&B) two-shot, guided, short range campaign. FT 04-4 was scheduled to be accomplished in FY05, but was slipped to FY06, because of test range schedule conflicts. <p>FY06 Planned Program:</p> <ul style="list-style-type: none"> Conduct and execute FT04-4 (CMCM-2) campaign. Complete post-test analysis of FT04-2. 			

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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C. Other Program Funding Summary								
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	

D. Acquisition Strategy

The RTO directs various executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDCs and other MDA programs to execute the various diverse efforts within the BMDS test program. Based on the specific effort / activity being conducted, acquired, or maintained, these executing agents use various acquisition strategies that conform to their respective headquarters regulations. The executing agents strive to use contracting strategies that provide the flexibility needed to test and assess to BMDS in a capabilities-based environment.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Product Development								

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Flight Tests								
BMDS FT	Various	Various including USASMDC	24,718	0	N/A	0	N/A	24,718
Test Planning & Operations	Various	Various APL-JHU/MITLL/Sandia/WSMR/NSWC	11,836	0	N/A	0	N/A	11,836
TA&R/JAT	Various	Various including USASMDC/USAMCOM	6,900	0	N/A	0	N/A	6,900
Ground Tests								
MDIE	Various	JNIC, Colorado Springs, CO	22,626	0	N/A	0	N/A	22,626

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Exercise Overlays	Various	JNIC, Colorado Springs, CO	13,034	0	N/A	0	N/A	13,034
Measurements Tests								
FT 04-2 & FT 04-4	Various	Various/ including USASMDC	100,420	0	N/A	0	N/A	100,420
Subtotal Test and Evaluation			179,534	0		0		179,534

Remarks Funding for OTA Participation is reflected in Budget Project 0304.

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								

Remarks

Project Total Cost			179,534	0		0		179,534
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Remarks The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified.

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Aegis BMD Cooperative Research Program																																
JCTV-1					◇																											
ARROW System Improvement Program																																
AST-10					◆																											
AST-11								◇																								
AST-12								◇																								
ABL																																
First Flight	◆																															
First Light	◆																															
System Ground Tests																																
IGT-3	▽																															
IGT-4b	▽																															
WG 04-1 (IMD-04.5)	▽																															
GT 04-1a (IGT-5)		▽																														
GT 04-2 (DGT-1)		▽																														
GT 04-5 (MDIE 05a)			▽																													
WG 04-2 (IMD 5-1)			▽																													

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▽	System Level Test (complete)
▲	Complete Activity
△	Significant Event (planned)
☆	Milestone Decision (planned)
◇	Element Test (planned)
▽	System Level Test (planned)
△	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
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APPROPRIATION/BUDGET ACTIVITY
RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Ground Tests																																
WG 04-3 (IMD-5.2)			▼																													
WG 04-4 (IMD-5.3)				▼																												
DGT 04-2a Phase 1							▼																									
IGT 04-1a							▼																									
WG 04-5 (IMD-5.4)							▼																									
DGT 04-2a Phase 2								▼																								
GTX 06-1								▼																								
IGT 04-1b								▼																								
Amalgam Phantom 06											▼																					
DGT 04-2b								▼																								
GT 04-1b (IGT-5)								▼																								
GT 04-2b								▼																								
GTX 06-2								▼																								
GTD 06-1												▼																				
GTI 06-1												▼																				

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2006

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Flight Tests																												
IFT-13c	▼																											
FTM 04-1 (FM-7)		▼																										
IFT-14		▼																										
PAC-2 GEM: 2-1		◆																										
FT 04-2 (CMCM-1)				▼																								
FT 04-5 (Cobra Dane LRALT)				▼																								
PAC-3: 2-2				◆																								
ATM-46					▼																							
FT-1					◆																							
FTM 04-2					◆																							
FTT-01					◆																							
PAC-3: 2-3					◆																							
FT 04-1 (IFT-16a)							▽																					
FT 04-4 (CMCM-2)								▽																				
FTG-2								◆																				
FTM 06-1								▽																				

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Flight Tests																												
FTT-02								◇																				
FTT-03								◇																				
P6-2								◇																				
P6-4								◇																				
FT 06-1												▽																
FTG-3												▽																
FTT 04												▽																
N FIRE-2A												◇																
FTG 06-1												◇																
Glory Trips (USAF Operational)/Potential BMDS Tests																												
GT-188		▽																										
GT-187			▲																									
GT-189			▽																									
SERV-2			▽																									
SERV-3							▲																					
GT-190								▲																				
GT-191								▲																				
GT-192												▲																
SERV-4												▲																

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▽	System Level Test (complete)
▲▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
▽	System Level Test (planned)
▲▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Aegis BMD Cooperative Research Program							
JCTV-1		2Q					
ARROW System Improvement Program							
AST-10		1Q					
AST-11		3Q					
AST-12		4Q					
ABL							
First Flight	1Q						
First Light	1Q						
System Ground Tests							
IGT-3	1Q						
IGT-4b	1Q						
WG 04-1 (IMD-04.5)	1Q						
GT 04-1a (IGT-5)	2Q						
GT 04-2 (DGT-1)	2Q						
GT 04-5 (MDIE 05a)	3Q						
WG 04-2 (IMD 5-1)	3Q						
WG 04-3 (IMD-5.2)	3Q						
WG 04-4 (IMD-5.3)	4Q						
DGT 04-2a Phase 1		1Q					
IGT 04-1a		1Q					
WG 04-5 (IMD-5.4)		1Q					
DGT 04-2a Phase 2		2Q					
GTX 06-1		2Q					
IGT 04-1b		2Q					
Amalgam Phantom 06		3Q					
DGT 04-2b		3Q					
GT 04-1b (IGT-5)		3Q					
GT 04-2b		3Q					
GTX 06-2		3Q					
GTD 06-1		4Q					

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
GTI 06-1		4Q					
System Flight Tests							
IFT-13c	1Q						
FTM 04-1 (FM-7)	2Q						
IFT-14	2Q						
PAC-2 GEM: 2-1	2Q						
FT 04-2 (CMCM-1)	4Q						
FT 04-5 (Cobra Dane LRALT)	4Q						
PAC-3: 2-2	4Q						
ATM-46		1Q					
FT-1		1Q					
FTM 04-2		1Q					
FTT-01		1Q					
PAC-3: 2-3		1Q					
FT 04-1 (IFT-16a)		2Q					
FT 04-4 (CMCM-2)		3Q					
FTG-2		3Q					
FTM 06-1		3Q					
FTT-02		3Q					
FTT-03		3Q					
P6-2		3Q					
P6-4		3Q					
FT 06-1		4Q					
FTG-3		4Q					
FTT 04		4Q					
N FIRE-2A		4Q					
FTG 06-1			1Q				
Glory Trips (USAF Operational)/Potential BMDS Tests							
GT-188	2Q						
GT-187	4Q						

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
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Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
GT-189	4Q						
SERV-2	4Q						
SERV-3		2Q					
GT-190		3Q					
GT-191		3Q					
GT-192		4Q					
SERV-4		4Q					

Element participation in system test events is funded within the respective element budget.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE			
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets			

COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0804 Test & Evaluation Block 2006	9,769	133,972	128,760	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

Note: FY07 RDT&E Test Articles: Integrate Launch Vehicles and Payloads to produce two test articles for FT 06-4 (CMCM-4).

A. Mission Description and Budget Item Justification

As indicated in the MDA Integrated Master Test Plan (IMTP), the MDA T&E program has six primary objectives: 1) collect system verification and assessment data that demonstrates BMDS effectiveness; 2) verify Block design capability; 3) identify areas where technology can increase overall system performance; 4) identify system vulnerabilities, 5) provide anchoring and validation data for modeling and simulation tools, and 6) to support early capability readiness review board and potential decision memorandum No. 5 fielding decision. To achieve these objectives, the BMDS CTF Block 06 Test and Evaluation project funds system-level a) Flight Tests (BMDS FTs), b) Ground Tests (BMDS GTs) that include exercise overlays (i.e. Wargames) associated with Combatant Command (COCOM) exercises, and c) Critical Measurements and Countermeasure (CMCM) Tests. These test events will be executed from Jan 06 through Dec 07.

a) System Flight Tests. FTs will examine the capability of the BMDS to detect, track, and engage targets. In Block 06, more advanced tests are planned that will provide data to support verification of more complex Engagement Sequence Groups (ESGs). Test scenario highlights during this period include: Demonstration of Aegis BMD providing sensor data for launch and engagement support (FTM 06-2), GMD return to flight events FTGs 1-4; multiple target engagements by Aegis BMD (FTM 06-4); GMD Engaging on a Sea-based X-Band (SBX) radar cue (FTG 06-2) and a Forward Based X-Band -Transportable (FBX-T) radar cue (FTG 06-3). This project will also provide analysis of each system test event through the Joint Analysis Team (JAT).

b) Ground Tests. A vigorous GT program brings together a variety of controllable and flexible testing venues to include high fidelity hardware in the loop tests and nondestructive tests performed in a controlled repeatable environment. The exercise overlays to COCOM exercises (Wargaming) portion of GTs is the best venue to provide Operator-in-the-Loop (OITL) interactions and to gain an understanding of how the system performs during conditions in which OITL performance is measured as well as that of the system hardware and software. BMDS ground testing consists of 1) BMDS Integrated Ground Tests (GTI) ; Integrated Exercises that use a lab test environment to the determine the impact of specific threats on a wide variety of proposed engagement scenarios; 2) BMDS Distributed Ground Tests (GTD) ; Exercises that combine the fielded hardware and software of most of the most of the BMDS elements to exercise the BMDS communications networks and communication links; and 3) BMDS Ground Tests Other (GTX) ; Shorter integration exercises that offer ground testing flexibility configured to meet specific Engagement Sequence Groups (ESGs).

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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c) CMCM Flight Tests. CMCM FTs provide a venue for risk reduction for BMDS Block Testing, addressing phenomenology (understanding the physics of what was observed during a test event and its effects on BMDS sensors), countermeasures, and counter-countermeasures requirements, and providing critical measurements to support development and validation of algorithms, modeling and simulation, discrimination, and new technology demonstrations. CMCM FTs augment various MDA and Elements test programs. FY06 includes preliminary planning for FT 06-4(CMCM-4). This test will provide risk reduction for the Miniature Kill Vehicle Program, continue to characterize advanced countermeasures, and demonstrate new technologies. CMCM Program being realigned to focus on MDA Priorities.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Flight Tests	3,152	54,068	41,693
RDT&E Articles (Quantity)	0	0	0

Flight Testing (FT) is planned and executed to provide anchoring data for Modeling and Simulation (M&S) tools, to collect test data to further characterize the BMDS, and to demonstrate BMDS operational capability in whole or in part. Even though FTs are conducted in realistic operational environments and are critical to achieving system verification requirements, they only examine a single scenario/vignette and parts of Engagement Sequence Groups (ESGs) and do have environmental and safety constraints.

FY05 Accomplishments:

- Conducted preliminary planning for Block 2006 Flight Tests.

FY06 Planned Program:

- Plan and execute FY 06 system flight tests and conduct post test analysis: Aegis BMD FTM 06-1; GMD FTG-3, FT 04-1, and FT 06-1; THAAD FTT 04; CMCM FT 04-4; SERV-3; Glory Trip (GT) 191.
- Support Element FY 06 Test Execution: Aegis BMD JCTV-1; PATRIOT 2-3, P6-2, P6-4, GMD FTG-2 and 3; THAAD FTT-01, FTT-02, and FTT-03; and FTM 06-1.
- Conduct test planning for FY 07 system events: PATRIOT ATM-48; GMD FTG-4 and FTG 06-2; THAAD FTT 06-2 and FTT 06-5; Aegis BMD FTM 06-1 and 06-2 and FTM 06-5; GT-194 and GT-196.
- Continue to coordinate target development including target systems requirements, integration, and component test.
- Plan and acquire long lead items for systems test and plan system execution and reporting.
- Continue to coordinate integration of multiple elements and components.
- Refine scenario designs for BMDS Flight Tests to support ESGs identified in the BMDS IMTP.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Continue to populate the BMDS Test Database with the latest test data inputs to support capability assessments by Systems Engineering, JTAMDO/STRATCOMMS, and OTAs, and provide validation data for models and simulations.

FY07 Planned Program:

- Support and coordinate Block 08 target development including target systems requirements, integration, and component testing requirements.
- Continue Development of Block 08 scenario designs for BMDS Flight Tests to support Block 08 ESGs identified in the Block 08 TBDD.
- Continue to populate the BMDS Test Database with the latest test data inputs to support capability assessments by Systems Engineering, JTAMDO/STRATCOM, and OTAs; and provide validation data for models and simulations.
- Plan and acquire long lead items for systems test and plan system execution and reporting.
- Plan and execute the following FY 07 System Flight Tests: PATRIOT ATM-48; GMD FTG-4 and FTG 06-2; THAAD FTT 06-2 and FTT 06-5; Aegis BMD FTM 06-1, FTM 06-2 and FTM 06-5; GT-194 and GT-196.
- Support Elements in planning and execution of the following Block 06 FY 07 Flight Tests: GMD FTG 06-1; PATRIOT P6L-2, P6L-3, 16-2, 16-3, 7-2; THAAD FT 06-2, FTT-05, FTT 06-1, FTT 06-3, FTT 06-4; Aegis BMD FTM 06-3.

	FY 2005	FY 2006	FY 2007
Ground Tests	3,776	46,126	49,567
RDT&E Articles (Quantity)	0	0	0

Ground Testing (GT), using Modeling and Simulations (M&Ss) that have been validated using anchoring data from flight tests, is the primary method for verifying and validating functional Block capability. Ground testing is used to collect data for BMDS characterization and assessment, component and element integration, and exploration of scenarios where flight testing is either impractical or impossible. GT allows examination of mature designs and identification and efficient correction of performance anomalies based on the capability to test all Engagement Sequence Groups (ESGs) using digital representations of realistic threat types, trajectories, geometries, and raid sizes that would be cost prohibitive to do in flight testing.

FY05 Accomplishments:

- Performed initial test planning for GTI 06-1.
- Performed initial test planning for GTX 06-1.
- Conducted planning for Block 2006 Exercise Overlays.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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FY06 Planned Program:

- Execute and perform post-test analysis of GTX 06-1, GTX 06-2 and GTI 06-1.
- Test Planning and conduct of the PATRIOT PDB-6 Limited User Test (LUT).
- Provide support for a Ground Test Laboratory build-out to provide a BMDS Integration and Test Center (BITC) capability dedicated to Ground Test activities. This will alleviate a major issue with scheduling and conducting integrated Ground Tests.
- Plan for GTD 06-1 and initial test planning for GTX 06-3, GTI 06-2 and GTD 06-2.
- Plan and execute Exercise Overlay associated with the Amalgam Phantom 06 COCOM exercises and perform post-test analysis of data to support BMDS system engineering.

FY07 Planned Program:

- Execute GTD 06-1 and perform post-test analysis.
- Plan, execute and perform post-test analysis of GTX 06-3, GTI 06-2, GTX 06-4 and GTX 06-5.
- Initiate test planning for GTI 06-3.
- Plan and execute exercise overlays associated with the Vigilant Shield 07 and Terminal Fury 07 COCOM exercises and perform post test analysis.

	FY 2005	FY 2006	FY 2007
Measurements Tests	2,841	33,778	37,500
RDT&E Articles (Quantity)	0	0	0

The BMDS CTF plans and executes the BMDS measurements program to provide data products that support block characterization, modeling and simulation validation, phenomenology, algorithm development, and new technology developments. These critical measurements are conducted for block development and to characterize system vulnerabilities from threats and countermeasures.

FY05 Accomplishments:

- Initiated test planning, sensor planning, range integration and design reviews for FT 06-4 (CMCM-4).

FY06 Planned Program:

- Conduct test & sensor planning, range integration efforts and design reviews in support of FT 06-4 (CMCM-4); an unguided, short range, two-shot campaign.
- Conduct post-mission analysis on FT 04-2 (CMCM-2).
- Initiate efforts for test & sensor planning and range integration for FT 08-2 (CMCM-6).

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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FY07 Planned Program:

- Complete planning for the FT 06-4 (CMCM-4) to provide critical BMDS measurements, BMDS characterization against countermeasures and reduce the risk for future BMDS blocks.
- Prepare to execute the FT 06-4 test campaign in early FY08.
- Begin test & sensor planning, range integration, design reviews, and long lead for FT 08-5 (CMCM-8).

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets				

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

The RTO directs various executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDCs and other MDA programs to execute the various diverse efforts within the BMDS test program. Based on the specific effort / activity being conducted, acquired, or maintained, these executing agents use various acquisition strategies that conform to their respective headquarters regulations. The executing agents strive to use contracting strategies that provide the flexibility needed to test and assess to BMDS in a capabilities-based environment.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Product Development								

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Flight Tests								
BMDS FT	Various	USASMDC, WSMR, MITLL, JNIC & VAFB/ AL, NM, MA, HI & CA	5,614	28,894	1Q	29,795	1Q	64,303
TA&R/JAT	Various	USASMDC & USACOM SED/ Huntsville & Redstone AL,	300	15,283	1Q	6,758	1Q	22,341
Test Planning & Operations	Various	Boeing/ Huntsville, AL	0	7,673	1Q	5,140	1Q	12,813
BMDS Risk/ECPS	Various	Various	0	2,218	1/4Q	0	N/A	2,218
Ground Tests								

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
BMDS GT/MDIE	Various	JNIC/ Colorado Springs, CO	6,623	42,872	1Q	41,660	1Q	91,155
Exercise Overlays	Various	JNIC/ Colorado Springs, CO	3,245	3,254	1Q	7,907	1Q	14,406
Measurements Tests								
FT 06-4	Various	USASMDC / Huntsville, AL	9,494	1,251	1Q	12,500	1Q	23,245
Targets	Various	MDA & USASMDC / Washington, D.C. & Huntsville, AL	0	32,527	1Q	25,000	1Q	57,527
Subtotal Test and Evaluation			25,276	133,972		128,760		288008

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								
Project Total Cost			25,276	133,972		128,760		288,008

Remarks
 The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified.

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2006

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Ground Tests																																
DGT 04-2a Phase 1					▼																											
IGT 04-1a					▼																											
WG 04-5 (IMD-5.4)					▼																											
GTX 06-1						▼																										
Amalgam Phantom 06							▼																									
DGT 04-2b							▼																									
GT 04-1b (IGT-5)							▼																									
GTD 06-1								▼																								
GTI 06-1								▼																								
GTX 06-3									▼																							
Terminal Fury									▼																							
Vigilant Shield 06									▼																							
GTI 06-2										▼																						
Amalgam Phantom 07											▼																					
GTD 06-2											▼																					
GTX 06-4											▼																					
GTX 06-5												▼																				

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
February 2006

APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
AST-10					◆																											
ATM-46					▽																											
FT-1					◆																											
FTM 04-2					◆																											
FTT-01					◆																											
PAC-3: 2-3					◆																											
FT 04-1								▽																								
JCTV-1								◇																								
AST-11								◇																								
FT 04-4 (CMCM-2)								▽																								
FTG-2								◇																								
FTM 06-1								▽																								
FTT-02								◇																								
FTT-03								◇																								
P6-2								◇																								
P6-4								◇																								

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile

Date
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APPROPRIATION/BUDGET ACTIVITY
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

R-1 NOMENCLATURE
0603888C Ballistic Missile Defense Test and Targets

Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Flight Tests																												
AST-12								◆																				
FT 06-1								▽																				
FTG-3								▽																				
FTT-04								▽																				
N FIRE-2A								◆																				
16-2								◆																				
ATM-48								◆																				
FT 06-2								◆																				
FTG-4								▽																				
FTM 06-2								▽																				
FTT-05								◆																				
P6L-2								◆																				
P6L-3								◆																				
16-3									◆																			
FTG 06-1									◆																			
FTM 06-5									▽																			
FTT 06-1									◆																			
(PAC) 7-2												◆																

Legend

	Significant Event (complete)		Significant Event (planned)
	Milestone Decision (complete)		Milestone Decision (planned)
	Element Test (complete)		Element Test (planned)
	System Level Test (complete)		System Level Test (planned)
	Complete Activity		Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Flight Tests																												
FTM 06-3											◆																	
FTT 06-2											▽																	
AST-13												◆																
FTT 06-3												◆																
FTT 06-4												◆																
FTT 06-5																▽												
Measurement Tests																												
FT 04-4 (CMCM-2)								▽																				

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▽	System Level Test (complete)
▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
▽	System Level Test (planned)
▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
System Ground Tests							
DGT 04-2a Phase 1		1Q					
IGT 04-1a		1Q					
WG 04-5 (IMD-5.4)		1Q					
GTX 06-1		2Q					
Amalgam Phantom 06		3Q					
DGT 04-2b		3Q					
GT 04-1b (IGT-5)		3Q					
GTX 06-2		3Q					
GTD 06-1		4Q					
GTI 06-1		4Q					
GTX 06-3			1Q				
Terminal Fury			1Q				
Vigilant Shield 06			1Q				
GTI 06-2			2Q				
Amalgam Phantom 07			3Q				
GTD 06-2			3Q				
GTX 06-4			3Q				
GTX 06-5			4Q				
System Flight Tests							
AST-10		1Q					
ATM-46		1Q					
FT-1		1Q					
FTM 04-2		1Q					
FTT-01		1Q					
PAC-3: 2-3		1Q					
FT 04-1		2Q					
JCTV-1		2Q					
AST-11		3Q					
FT 04-4 (CMCM-2)		3Q					

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FTG-2		3Q					
FTM 06-1		3Q					
FTT-02		3Q					
FTT-03		3Q					
P6-2		3Q					
P6-4		3Q					
AST-12		4Q					
FT 06-1		4Q					
FTG-3		4Q					
FTT-04		4Q					
N FIRE-2A		4Q					
16-2			1Q				
ATM-48			1Q				
FT 06-2			1Q				
FTG-4			1Q				
FTM 06-2			1Q				
FTT-05			1Q				
P6L-2			1Q				
P6L-3			1Q				
16-3			2Q				
FTG 06-1			2Q				
FTM 06-5			2Q				
FTT 06-1			2Q				
(PAC) 7-2			3Q				
FTM 06-3			3Q				
FTT 06-2			3Q				
AST-13			4Q				
FT 06-4 (CMCM-4)			4Q				
FTT 06-3			4Q				
FTT 06-4			4Q				
FTT 06-5				1Q			

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
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Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Measurement Tests							
FT 04-4 (CMCM-2)		3Q					
FT 06-4 (CMCM-4)			4Q				

Element participation in system test events is funded within the respective element budget.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE			
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets			

COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0904 Test & Evaluation Block 2008	0	0	45,184	127,791	132,309	0	3,625
RDT&E Articles Qty	0	0	0	0	1	0	0

Note: FY09 RDT&E Test Articles: Integrate Launch Vehicle and Payload to produce test article for FT 08-4 (CMCM-8).

A. Mission Description and Budget Item Justification

As indicated in the MDA Integrated Master Test Plan (IMTP), the MDA T&E program has five primary objectives: 1) collect system verification and assessment data that demonstrates BMDS effectiveness, 2) verify Block design capability, 3) identify areas where technology can increase overall system performance, 4) identify system vulnerabilities, 5) provide anchoring and validation data for modeling and simulation tools, and 6) to support the capability readiness review decision for the technical review board and potential decision memorandum No. 5 fielding decision. To achieve these objectives, the BMDS CTF Block 2008 Test and Evaluation funds system-level flight tests (BMDS FTs), Critical Measurements and Countermeasure (CMCM) Tests, Ground Tests (BMDS GTs) and Exercise overlays associated with Combatant Command (COCOM) exercises that will be executed from Jan 2008 through Dec 2009. This project will conduct BMD System Tests to support verification of achieved BMDS block capability of Engagement Sequence Groups (ESGs) available in Block 2008. These System Flight Tests will examine the capability of the BMDS to detect, track, and engage targets. This project will also provide analysis of each System Test event through the Joint Analysis Team (JAT). To support the BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE) and Test Planning. This activity supports data planning, collection and analysis of radar for missions supported by Observation Island and Gray Star. Critical Measurements and Countermeasure (CMCM) flight tests are also funded under the Block 2008 Project, but are managed as part of the Measurements Program. CMCMs are dedicated flight tests which provide a venue for risk reduction for BMDS Block Testing, addressing phenomenology, countermeasures, and counter-countermeasures requirements, and providing critical measurements to support development and validation of algorithms, modeling and simulation, discrimination, and new technology demonstrations. CMCMs provide test venues for MDA Organizations that do not possess dedicated test agents, and augment MDA Element test programs. FT 08-4* is scheduled for 2QFY09. CMCM Program being realigned to focus on MDA Priorities.

*Note: FT 06-4 was originally funded under Project 0904 (Block 2008) However, in an effort to better align the CMCMs with the current Block development requirements, FT 06-4 has been moved to Project 0804 (Block 2006) and FT 08-4 is now in Project 0904 (Block 2008). CMCM-5, CMCM-6, CMCM-7 and CMCM-9 have been canceled.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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B. Accomplishments/Planned Program			
	FY 2005	FY 2006	FY 2007
Flight Tests	0	0	10,706
RDT&E Articles (Quantity)	0	0	0

Flight Testing (FT) is planned and executed to provide anchoring data for Modeling and Simulation (M&S) tools, to collect test data to further characterize the BMDS, and to demonstrate BMDS operational capability in whole or in part. Even though FTs are conducted in realistic operational environments and are critical to achieving system verification requirements, they only examine a single scenario/vignette and parts of ESGs and do have environmental and safety constraints.

- FY07 Planned Program:
- All FY07 funds are for planning for Block 2008 System Flight Tests.
 - Continue to coordinate target development including target systems requirements, integration and component test.
 - Acquire long lead items for systems test and plan system execution and reporting. Continue to coordinate integration of multiple elements and components. Refine scenario designs for BMDS Flight Tests to support Engagement Sequence Groups (ESGs) identified in the BMDS IMTP.
 - Continue to populate the BMDS Characterization Data Base with the latest test data inputs to support capability assessments by Systems Engineering, JTAMDO/STRATCOMMS and OTAs, and provide validation data for models and simulations.

	FY 2005	FY 2006	FY 2007
Ground Tests	0	0	3,975
RDT&E Articles (Quantity)	0	0	0

Ground Testing (GT), using Modeling and Simulations (M&Ss) that have been validated using anchoring data from flight tests, is the primary method for verifying and validating functional Block capability. Ground testing is used to collect data for BMDS characterization and assessment, component and element integration, and exploration of scenarios where flight testing is either impractical or impossible. GT allows examination of mature designs and identification and efficient correction of performance anomalies based on the capability to test all Engagement Sequence Groups (ESGs) using digital representations of realistic threat types, trajectories, geometries, and raid sizes that would be cost prohibitive to do in flight testing.

- FY07 Planned Program:
- All FY07 funds are for planning activities and long lead procurement to support BMDS Block 2008 Ground Tests that are operationally representative of the software and hardware versions of the BMDS system.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Conduct test planning for BMDS Block 2008 Ground Tests.
- Conduct Test Planning for BMDS Block 2008 Exercise Overlays.

	FY 2005	FY 2006	FY 2007
Measurements Test	0	0	30,503
RDT&E Articles (Quantity)	0	0	0

The BMDS CTF plans and executes the BMDS measurements program by providing data products that support block characterization, modeling and simulation validation, phenomenology, algorithm development, and new technology developments. These critical measurements are conducted for block development and to characterize threats and countermeasures. Block 2008 requirements in FY07 include long lead procurement items for CMCM flight tests.

FY07 Planned Program:

- FY07 funds are for CMCM flight test planning and long lead procurement for Block 2008 CMCM flight tests and analysis.
- Continue to determine Target and Interceptor requirements for FT 08-2 and FT 08-5.
- Complete analysis of FT 06-4 (CMCM-4).

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

The RTO directs various executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDCs and other MDA programs to execute the various diverse efforts within the BMDS test program. Based on the specific effort / activity being conducted, acquired, or maintained, these executing agents use various acquisition strategies that conform to their respective headquarters regulations. The executing agents strive to use contracting strategies that provide the flexibility needed to test and assess to BMDS in a capabilities-based environment.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Product Development								

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Flight Tests								
BMDS FT			0	0	N/A	6,237	1Q	6,237
TA&R/JAT			0	0	N/A	2,384	1Q	2,384
Test Planning & Operations		Boeing/ Huntsville, AL	0	0	N/A	2,085	1Q	2,085
Ground Tests								
BMDS GT/MDIE		JNIC/ Colorado Springs, CO	0	0	N/A	3,294	1Q	3,294

Remarks

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Exercise Overlays		JNIC/ Colorado Springs, CO	0	0	N/A	681	1Q	681
Measurements Test								
FT 08-2 & FT 08-4	Various	Various including USASMDC/ Huntsville, AL	0	0	1Q	10,313	1Q	10,313
Targets	Various	MDA/ Washington, D.C.	0	0	N/A	20,190	1Q	20,190
Subtotal Test and Evaluation			0	0		45,184		45184

Remarks

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								

Remarks

Project Total Cost			0	0		45,184		45,184
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Remarks

The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified.

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Ground Tests																												
GTD 06-3														▽														
GTI 06-3														▽														
Terminal Fury 08														▽														
Vigilant Shield 08														▽														
GTX 08-1															▽													
Amalgam Phantom 08																▽												
GTX 08-2																▽												
GTX 08-3																	▽											
GTI 08-1																		▽										
Terminal Fury 09																			▽									
Vigilant Shield 09																				▽								
GTD 08-1																					▽							
GTX 08-4																						▽						
Amalgam Phantom 09																							▽					
GTX 08-5																							▽					
GTX 08-6																								▽				
GTI 08-2																									▽			

Legend	
	Significant Event (complete)
	Milestone Decision (complete)
	Element Test (complete)
	System Level Test (complete)
	Complete Activity
	Significant Event (planned)
	Milestone Decision (planned)
	Element Test (planned)
	System Level Test (planned)
	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
JBMD-1													◇																			
P6X-2													▽																			
P6X-4													◇																			
FT 08-2 (TMDD-2)														▽																		
FT 08-3 (SMDD-2)															▽																	
FTG 08-1															▽																	
FTM 08-1															▽																	
FTT 06-6															▽																	
FT 08-4 (RDC)																▽																
FTL 08-1																▽																
FTT 08-1																▽																
FTG 08-3																			▽													
FTT 08-2																			▽													
FT 08-5 (CMCM)																				▽												
FT 08-6 (RDC)																				▽												
FTT 08-3																				▽												

Legend	
	Significant Event (complete)
	Milestone Decision (complete)
	Element Test (complete)
	System Level Test (complete)
	Complete Activity
	Significant Event (planned)
	Milestone Decision (planned)
	Element Test (planned)
	System Level Test (planned)
	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
System Ground Tests							
GTD 06-3				1Q			
GTI 06-3				1Q			
Terminal Fury 08				1Q			
Vigilant Shield 08				1Q			
GTX 08-1				2Q			
Amalgam Phantom 08				3Q			
GTX 08-2				3Q			
GTX 08-3				4Q			
GTI 08-1					1Q		
Terminal Fury 09					1Q		
Vigilant Shield 09					1Q		
GTD 08-1					2Q		
GTX 08-4					2Q		
Amalgam Phantom 09					3Q		
GTX 08-5					3Q		
GTX 08-6					4Q		
GTI 08-2						1Q	
Terminal Fury 10						1Q	
Vigilant Shield 10						1Q	
ETD 08-2						2Q	
GTD 08-2						2Q	
GTX 10-1						2Q	
Amalgam Phantom 10						3Q	
GTX 10-2						3Q	
GTX 10-3						4Q	
System Flight Tests							
(PAC) 7-3				1Q			
FT 06-7 (TMDD-1)				1Q			
FT 06-8 (SMDD-1)				1Q			
FT 08-1 (RDC)				1Q			

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail					Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FTG 06-2				1Q			
FTM 06-4				1Q			
JBMD-1				1Q			
P6X-2				1Q			
P6X-4				1Q			
FT 08-2 (TMDD-2)				2Q			
FT 08-3 (SMDD-2)				3Q			
FTG 08-1				3Q			
FTM 08-1				3Q			
FTT 06-6				3Q			
FT 08-4 (RDC)				4Q			
FTL 08-1				4Q			
FTT 08-1				4Q			
FTG 08-3					1Q		
FTT 08-2					1Q		
FT 08-5 (CMCM)					2Q		
FT 08-6 (RDC)					2Q		
FTT 08-3					2Q		
FTG 08-4					3Q		
FTL 08-2					3Q		
FTM 08-2					3Q		
FT 08-7 (RDC)					4Q		
FTG 08-5					4Q		
FTT 08-4					4Q		
FT 08-8 (STSS)						1Q	
FTG 10-1						2Q	
FTL 10-1						2Q	
FTT 10-1						2Q	
FT 10-1 (RDC)						3Q	
FT 10-2 (STSS)						3Q	
FTM 10-1						3Q	

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
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Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FTG 10-2						4Q	
FTL 10-2						4Q	
FTT 10-2						4Q	
Measurement Tests							
FT 08-5 (CMCM-8)					2Q		

Element participation in system test events is funded within the respective element budget.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2006	
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
COST (\$ in Thousands)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0004 Test & Evaluation Block 2010		0	0	0	35,157	39,815	119,011	110,446
RDT&E Articles Qty		0	0	0	0	0	0	1

Note: RDT&E Test Articles: FY11 - Integrate Launch Vehicle and Payload to produce test article for FT 10-4 (CMCM-12).

A. Mission Description and Budget Item Justification

The BMDS CTF Block 2010 Test and Evaluation funds system-level flight tests (BMDS FTs), Ground Tests (BMDS GTs), and Exercise Overlays to Combatant Commander (COCOM) Exercises that are being executed from Jan 2010 through Dec 2011. This project will conduct BMD System Tests to support verification of achieved BMDS block capability. These System Flight Tests will examine the capability of the BMDS to detect, track, and engage targets. This project will also provide analysis of each System Test event through the Joint Analysis Team (JAT). Critical Measurements and Countermeasure (CMCM) flight tests are also funded under the Block 2010 Project, but are managed as part of the Measurements Program. CMCMs are dedicated flight tests which provide a venue for risk reduction for BMDS Block Testing, addressing phenomenology, countermeasures, and counter-countermeasures requirements, and providing critical measurements to support development and validation of algorithms, modeling and simulation, discrimination, and new technology demonstrations. CMCMs provide test venues for MDA organizations that do not possess dedicated test agents and augment MDA Element test programs.

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
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PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

The RTO directs various executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDCs and other MDA programs to execute the various diverse efforts within the BMDS test program. Based on the specific effort / activity being conducted, acquired, or maintained, these executing agents use various acquisition strategies that conform to their respective headquarters regulations. The executing agents strive to use contracting strategies that provide the flexibility needed to test and assess to BMDS in a capabilities-based environment.

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDTE&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
System Flight Tests																																
FTM 10-2																																
FT 10-5 (RDC)																																▽
FTG 10-5																																▽
FTT 10-4																																▽
System Ground Tests																																
GTI 08-2																																▽
Terminal Fury 10																																▽
Vigilant Shield 10																																▽
GTD 08-2																																▽
GTX 10-1																																▽
Amalgam Phantom 10																																▽
GTX 10-2																																▽
GTX 10-3																																▽
GTI 10-1																																▽
Terminal Fury 11																																▽
Vigilant Shield 11																																▽

Legend	
	Significant Event (complete)
	Milestone Decision (complete)
	Element Test (complete)
	System Level Test (complete)
	Complete Activity
	Significant Event (planned)
	Milestone Decision (planned)
	Element Test (planned)
	System Level Test (planned)
	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
System Flight Tests							
FT 08-8 (STSS)						1Q	
FTG 10-1						2Q	
FTL 10-1						2Q	
FTT 10-1						2Q	
FT 10-1 (RDC)						3Q	
FT 10-2 (STSS)						3Q	
FTM 10-1						3Q	
FTG 10-2						4Q	
FTL 10-2						4Q	
FTT 10-2						4Q	
FTG 10-3							1Q
FTL 10-3							1Q
FT 10-4 (STSS)							2Q
FTT 10-3							2Q
FTG 10-4							3Q
FTL 10-4							3Q
FTM 10-2							3Q
FT 10-5 (RDC)							4Q
FTG 10-5							4Q
FTT 10-4							4Q
System Ground Tests							
GTI 08-2						1Q	
Terminal Fury 10						1Q	
Vigilant Shield 10						1Q	
GTD 08-2						2Q	
GTX 10-1						2Q	
Amalgam Phantom 10						3Q	
GTX 10-2						3Q	
GTX 10-3						4Q	
GTI 10-1							1Q

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Terminal Fury 11							1Q
Vigilant Shield 11							1Q
GTD 10-1							2Q
GTX 10-4							2Q
Amalgam Phantom 11							3Q
GTX 10-5							3Q
GTX 10-6							4Q

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2006	
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
R104 Test & Evaluation Block 2012	0	0	0	0	0	56,161	75,884
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The BMDS CTF Block 2012 Test and Evaluation funds system-level flight tests (BMDS FTs), Ground Tests (BMDS GTs) and Exercise Overlays to Combatant Commanders (COCOM) Exercises that are being executed from Jan 2012 through Dec 2013. This project will conduct BMD System Tests to support verification of achieved BMDS block capability. These System Flight Tests will examine the capability of the BMDS to detect, track, and engage targets. This project will also provide analysis of each System Test event through the Joint Analysis Team (JAT). Critical Measurements and Countermeasure (CMCM) flight tests are also funded under the Block 2012 Project, but are managed as part of the Measurements Program. CMCMs are dedicated flight tests which provide a venue for risk reduction for BMDS Block Testing, addressing phenomenology, countermeasures, and counter-countermeasures requirements, and providing critical measurements to support development and validation of algorithms, modeling and simulation, discrimination, and new technology demonstrations. CMCMs provide test venues for MDA organizations that do not possess dedicated test agents and augment MDA Element test programs.

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification						Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

The RTO directs various executing agents, including DoD agencies, Service Organizations, Laboratories and Program Offices, FFRDCs and other MDA programs to execute the various diverse efforts within the BMDS test program. Based on the specific effort / activity being conducted, acquired, or maintained, these executing agents use various acquisition strategies that conform to their respective headquarters regulations. The executing agents strive to use contracting strategies that provide the flexibility needed to test and assess to BMDS in a capabilities-based environment.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0305 Targets & Countermeasures Core	22,697	19,868	20,209	20,719	21,075	21,609	21,979
RDT&E Articles Qty	0	0	0	0	0	0	0

Note: The decrease in Project 0305 funding from FY05 to FY06 and out is due to a realignment of funds to the Integration Product Line in Projects 0805, 0905, and 0005.

A. Mission Description and Budget Item Justification

Targets & Countermeasures Core Support includes program office and field activity support. This includes the management of design, prototyping, development, product improvement, and qualification testing of BMDS targets in order to complete, verify, and test targets for the Initial Defensive Capability, and enhance the targets to test the BMDS capability. Since this project is comprised of entirely Program Management costs associated with Targets and Countermeasures Block development, no article quantities are reported.

The Accomplishments and Planned Program efforts identified below in Targets Support and Personnel Support are on-going level of effort activities. Efforts are cyclical and occur every year.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Targets Support	15,372	12,319	12,422
RDT&E Articles (Quantity)	0	0	0

- FY05 Accomplishments:**
- Supported activities for on-site Targets and Countermeasures field activity personnel, such as rent, office equipment, travel, security, and base infrastructure necessary to conduct daily operations.
- FY06 Planned Program:**
- Support activities for on-site Targets and Countermeasures field activity personnel, such as rent, office equipment, travel, security, and base infrastructure necessary to conduct daily operations.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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FY07 Planned Program:

- Support activities for on-site Targets and Countermeasures field activity personnel, such as rent, office equipment, travel, security, and base infrastructure necessary to conduct daily operations.

	FY 2005	FY 2006	FY 2007
Personnel Support	7,325	7,549	7,787
RDT&E Articles (Quantity)	0	0	0

FY05 Accomplishments:

- Funded government personnel salaries for program management, project support, project costs, and travel.

FY06 Planned Program:

- Funds government personnel salaries for program management, project support, project costs, and travel.

FY07 Planned Program:

- Funds government personnel salaries for program management, project support, project costs, and travel.

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

Because the majority of the activities funded in this Project 0305 are considered direct government costs necessary to maintain and sustain Targets and Countermeasures personnel in the field, a particular acquisition strategy is not applicable. Funds are sent directly to government Targets and Countermeasures activities receiving entities in the field and executed accordingly. A minimal amount of Firm Fixed Price and Cost Plus Award Fee contracts are in place for administrative, computer, logistics, program management, and systems engineering support activities.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Product Development								

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Targets Support								
Field Activity Support	C/Various	Various/ Kirtland, NM	7,989	3,651	1Q	3,239	1/4Q	14,879
Field Activity Support	C/Various	Various/ Huntsville, AL	15,304	8,668	1Q	9,183	1/4Q	33,155
Subtotal Support Costs			23,293	12,319		12,422		48034

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation								

Remarks

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Personnel Support								
Government Personnel		Wash., DC	5,333	2,899	1/4Q	2,935	1/4Q	11,167
Government Travel		Wash., DC	360	450	1/4Q	474	1/4Q	1,284
Government Support	C/FFP	SPARTA/ Wash., DC	7,830	4,200	1Q	4,378	1Q	16,408
Subtotal Management Services			13,523	7,549		7,787		28859

Remarks

Project Total Cost			36,816	19,868		20,209		76,893
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Remarks

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE					
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets					
COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0705 Targets & Countermeasures Block 2004	250,077	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2004 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will test and verify the Initial Defensive Capability as well as enhance the BMDS capability by providing capability-based targets of all types with an assortment of payloads and payload objects. Based on System Engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target. Funding for this program supports the design, prototyping, development, verification, product improvement, and qualification testing of BMDS Block 2004 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short and medium range target components.

Also funded in this project is the utilization of a targets prime contractor. Lockheed Martin Space Systems Company (LMSSC), based in Denver, Colorado, was selected as the targets prime contractor. LMSSC will be central to the development and acquisition of new target systems to support integrated and layered BMDS Block testing by providing program management and systems engineering functions across the Missile Defense Agency targets portfolio. Additionally, LMSSC will develop all future target configurations, including advanced targets, design and development of target payloads (to include instrumentation, re-entry vehicles, and countermeasures), and procurement of all long lead target material components. By emphasizing the use of product lines (i.e. development of common target components and parts), it is anticipated that both cycle time and cost will be reduced (see Section D, Acquisition Strategy for more details on the targets prime contract).

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Systems Engineering	132,028	0	0
RDT&E Articles (Quantity)	0	0	0

This effort provides the Missile Defense Agency (MDA) with Target Program Technical Direction and analyzes of target requirements cost, schedule, and technical performance of target systems development. This effort utilizes the spiral development process for long-range plans initiating new developments. Conducts functional allocation to product lines, product line specifications/interfaces and establishes guidelines for the conductivity of design reviews. Performs target system analysis with new concepts to verify system performance. Defines target program baseline, controls flight

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>test configuration, and conducts pre and post-flight analysis and documentation. Identifies treaty and environmental issues and develops plans for issue resolution. Development of the Flexible Target Family (FTF) is an initiative that emphasis commonality and modularity of components that span across target system representations within the family of target sets that can be rapidly integrated to support MDA flight tests. Accordingly, FTF will be composed of Target Sets that exhibit various degrees of threat emulation and have a broad range of performance characteristics and features that present flexible target behavior to test the multiple Ballistic Missile Defense System capabilities.</p> <p>FY05 Accomplishments:</p> <p>Spiral 1 - FTF Launch Vehicle Development:</p> <ul style="list-style-type: none">• Completed Development of the Spiral-1 Flexible Target Family System Specification• Continued Spiral 1 Development of Enhanced Capability Products<ul style="list-style-type: none">○ Development of the Launch Vehicle 2 Two-Stage Strategic Target System○ Development of the Common Avionics System○ Development of the Common Support Equipment○ Development of the Common Transporter Erector○ Development of the Universal Payload Deployment Module○ Development of a new suite of Countermeasures○ Development of the Flexible Target Family Long Range Air-Launched Target System• Completed System Requirement Review and Preliminary Design Review for the Flexible Target Family Spiral 1• Completed FTF Spiral-1 Functional Allocation and Interface Definition <p>Spiral 2 - FTF Re-Entry Vehicle Design:</p> <ul style="list-style-type: none">• Initiated Development of the Spiral-2 Flexible Target Family System Specification• Development of a new Small Re-entry Vehicle to be deployed with all standard-service launch vehicles in the Flexible Target Family.• Development of a modular dynamic control system and a multi-band Re-entry Vehicle antenna system with Radar Cross Section signature reduction to be employed on a Modified Ballistic Re-entry Vehicle and the Small Re-entry Vehicle.• Design of a Launch Vehicle second stage thrust termination system.• Development a Cold Gas Attitude Control System.• Completed FTF Spiral 2 Functional Allocation and Interface Definition II.		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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- Developed a Technology Transfer Plan from Sandia National Laboratory to Industry for sensor platform and countermeasure designs
- Completed Rolling Wave II Integrated Baseline Review
- Provided Target Systems Analysis of flight test for the following target missions:
 - Critical Measurements Program (CMP)-4b
 - PAC-3 DT/OT 12a
 - GMD IFT 13-C, IFT-14
 - Aegis FTM 04-1
 - Medium Range Target Demo FT 04-3
 - CMCM-1 FT 04-2a/b
 - LRALT/Cobra Dane FT-04-5

	FY 2005	FY 2006	FY 2007
Launch Vehicles	14,273	0	0
RDT&E Articles (Quantity)	0	0	0

This effort provides MDA with all launch delivery vehicles including boosters, interstages, and avionics (guidance and flight computers). This task includes conducting decomposition for booster, inter-stage and avionics requirements, characterizing and qualifying boosters, interstages, and avionics. Conducts necessary design reviews and supports other design reviews to ensure mission assurance. Ensures boosters, interstages and avionics adhere to interface specifications.

FY05 Accomplishments:

- Procured three (3) SR-19, one (1) M56 and one (1) M57 deactivated government boosters for the BMDS targets
- Procured two (2) Castor IVB commercial motors for the BMDS targets and risk reduction flights (AEGIS Medium Range Target)
- Supported the development of common equipment and vehicles for the Flexible Targets Family
- Researched, designed, and built one (1) replacement for the air transporter of the grounded C-141 aircraft
- Provided program management support for following successful launches;
 - PAC DT/OT12a (18 Nov 04)
 - AEGIS BMD TTV-8 (24 Feb 05)
 - CMCM-1 a/b (8/18 Aug 05)
 - Long Range Air Launch Target Cobra Dane (26 Sep 05)

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
	FY 2005	FY 2006	FY 2007
Data and Instrumentation	21,091	0	0
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides program management and development of: 1) unique target instrumentation as well as optical on-board target data collection instrumentation used for algorithm development/evaluation and payload characterization; 2) advanced instrumentation systems/techniques to include data collection and transmission techniques. Develops and delivers all on-board and target-deployed instrumentation products including sensors and telemetry systems. Performs requirements decomposition for instrumentation systems and products, provides mission support, and verification of specified data products. Conducts and supports design reviews to ensure mission assurance. Provides for standardization and interfaces with Test and Assessment on all range interface activities.</p> <p>FY05 Accomplishments:</p> <ul style="list-style-type: none"> • Completed optical characterization of M-FASP (Mid Course Fly Away Sensor Package) TCOS (Target and Countermeasures Observation System platform) • Performed P-3 Cast Glance enhancements for real time data transfer and analysis during flight • Procured TGRS (Translated Global Positioning System Range System) for future BMDS flight tests <ul style="list-style-type: none"> ○ Procured 3 Ground Translator Processor's (GTP's) ground stations for future BMDS flight tests ○ Procured 25 Digital Global Transmitters (DGT's) flight hardware for future missions BMDS flight tests • Development and procurement of Tracking and Data Relay Satellite Systems (TDRSS) transmitter for future direct to satellite Telemetry transmission capability 			
	FY 2005	FY 2006	FY 2007
Re-entry Vehicles	24,025	0	0
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides MDA with the design, development, build, and delivery of all Reentry Vehicle (RV) and Payload Deployment Module (PDM) products for MDA and the Ballistic Missile Defense System (BMDS). Includes RV and PDM requirements decomposition and analysis; RV and PDM characterization, qualification, and performance measurements; mission support; and pre-and post-mission data analysis. Provides interface standardization and ensures product adherence to interface specifications for successful integration and launch of RV and PDM products. Conducts RV and PDM design reviews and supports other product design reviews to provide product and mission assurance.</p>			

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
FY05 Accomplishments: <ul style="list-style-type: none">• Completed buildup and delivery of one Maneuvering Tactical Target Vehicle (MTTV) for DT/OT-12 mission; one Tactical Target Vehicle for FTM-04-1 mission; one Modified Ballistic Reentry Vehicle-2 (MBRV-2) for Medium Range Target Risk Reduction Flight (MRT RRF); one Modified Ballistic Reentry Vehicle-4 (MBRV-4) for FT-04-5 mission; and four Generic Rest of World (GROW) RVs with four PDMs for FT-13C, FT-14, and FT-04-2a/b missions to support BMDS testing• Upgrade/enhanced three GROW RVs and three PDMs to support Ground Based Midcourse (GMD) testing Developed acquisition strategy and initiated contractual actions for adaptive engineering of four inventory MBRV-1s to support Lower Tier Project Office (LTPO) and Theater High Altitude Area Defense (THAAD) testing with one option for a Bulk Chemical Experiment for LTPO• Began development of three MBRV-2s with Bulk Chemical Lethality Front Section (BCLFS) tanks to support Aegis Ballistic Missile Defense (BMD) and Japanese cooperative testing• Began development of four build-to-print and nine technologically enhanced new design MBRV-2s to support Aegis BMD, GMD, Space and Tracking Surveillance System (STSS), THAAD, Arrow Program Office (APO), and Japanese cooperative testing with two options for up to 15 new design MBRV-2s to support Aegis BMD, Airborne Laser (ABL), Kinetic Energy Interceptor (KEI), and STSS testing• Developed acquisition strategy and initiated contractual actions for two build-to-print MBRV-3s to support THAAD testing with two options for up to seven new-build multi-purpose MBRV-3s to support LTPO testing and, if required, future BMDS testing• Supported efforts for procurement of Flexible Target Family (FTF) PDMs to support GMD testing• Provided input to FTF System Specifications, FTF Payload Standard Interface Document, and common instrumentation approach in support of Spiral Development activities• Collected “in-situ” optical measurements of IBIS VEER (IV) Original Equipment Manufacturer (OEM) hardware and conducted Radar Cross Section (RCS) and materials characterization• Supported Endo IR Option discussions to determine requirement for characterizing RV Infrared (IR) signatures below 80km vs. current requirement of 100/80km• Conducted analysis to determine if existing RV designs will meet Small RV (SRV) requirements for GMD• Conducted IR signature assessment of GROW RV and MBRV-2 as flown on C-4 Hybrid launch vehicle on west coast trajectory from Kodiak Launch Complex• Assessed ability of MBRV-2 to survive boost and flight environments of C-4 and Minuteman II (MMII) launch vehicles		

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
	FY 2005	FY 2006	FY 2007
Logistics	7,495	0	0
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides MDA with all required inventory, launch support equipment, and transportation of targets and countermeasures hardware in support of BMDS testing. These efforts are essential in providing a dependable and accurate target system that BMDS has come to and continues to rely on for the success of their interceptor program. The continued success of these programs is vital for continued national security. This task includes integrated logistics support for all targets and countermeasure material, including facilities, inventory maintenance, spare parts, aging and surveillance, as well as special testing for target rocket motor propellants and other hazardous material handling. This task provides for the management and execution of the Consolidated Missile Asset Reuse for Targets (CMART) Program and provides all required facilities and monitoring for explosive storage and Foreign Military Asset (FMA) fuel calibration and storage.</p> <p>FY05 Accomplishments:</p> <ul style="list-style-type: none"> • Buildup, integration, and delivery of (1) IFT-14 Strategic Target System (STARS) vehicle to Kodiak Launch Complex (KLC) • Refurbishment and assembly of two (2) SR-19 motors and associated equipment and deliver for Long Range Air Launched Target (LRALT) Risk Reduction Flight (RRF) • Refurbishment, assembly, and delivery of; <ul style="list-style-type: none"> ○ Four (4) Castor IVB motors and associated equipment for test flights ○ One (1) High Explosive Rocket Assisted (Hera) target and associated equipment for test flight ○ One (1) Lance rocket motor and associated equipment for test flight • Storage, maintenance, and aging and surveillance program for, 84 Pershing II Reentry Vehicles and other components, 103 Lance Missiles, 17 Polaris A-3 motors, 6 Orbus Motors, Minuteman motors, 14 FMAs, and 7 Castor IVBs • Maintenance of existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex, and Pacific Missile Range Facility • Procurement of (2) assembled Castor IV motors using Government Furnished Equipment (GFE) cases to support future Medium Range Target (MRT) missions • Procured Trident C-4 non-motor assets for future use as targets • Refurbished and assembled one (1) Castor IVB motor and associated support equipment for the MRT RRF • Initiated procurement of Trident motors for future use as targets. Quantity TBD based upon negotiations with the Navy • Initiated procurement of additional FMA's to support future target flight tests • Refurbishment and assembly of three (3) Castor IVB motors and associated support equipment for FY06 Aegis flight tests 			

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
	FY 2005	FY 2006	FY 2007
Mission Management	39,325	0	0
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides MDA with target mission management and execution for overall mission assurance. Conducts mission planning, documentation, development of scenario plans in accordance with mission requirements. Controls target management (scheduling, configuration modifications) in support of BMDS and Element testing. Conduct safety operations specific to the mission and in conjunction with ranges. Plans and conducts target Mission readiness reviews and monitors environmental execution.</p> <p>FY05 Actual Accomplishments:</p> <ul style="list-style-type: none"> • Prepared for, conducted, and analyzed the results of the following successful missions: <ul style="list-style-type: none"> ○ CMP 4b mission (06 Oct 04) ○ PAC-3 DT/OT-12a mission (18 Nov 04) ○ GMD IFT-13C target mission (15 Dec 04) ○ GMD IFT-14 target mission (13 Feb 05) ○ THAAD Radar Orion mission (17 Feb 05) ○ Aegis FTM-04-1 mission (24 Feb 05) ○ MRT-1 RRF mission (08 Apr 05) ○ ABL LANCE RRF mission (15 Jun 05) ○ GMD Long Range Air Launch Target (LRALT) Cobra Dane mission (26 Sep 05) ○ FT-04-2-a/b mission (06 Aug 05) • Provided inputs to support the target certification process for future missions • Designed, installed and integrated a target control center at Joint Operation Center (JTOC) for LRALT mission that will be used for future operations • Developed Communications Security (COMSEC) and Operational Security (OPSEC) procedures and support for all missions due to change in Security Classification Guidelines 			

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
	FY 2005	FY 2006	FY 2007
Countermeasures	11,840	0	0
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides program management and development of various Countermeasure (CM) systems for BMDS flight testing, including characterization and ground testing of those countermeasure systems.</p> <p>FY05 Accomplishments:</p> <ul style="list-style-type: none"> • Initiated design and development of several new CM's • Conducted studies on legacy countermeasures to down-select designs for transition-to-limited production. Developed techniques, materials, and processes for new prototype CM's • Initiated transition of legacy countermeasure designs due to limited production from the National Laboratory's (MIT/Lincoln Laboratory and Sandia National Laboratory) to the Targets and Countermeasures Prime Contractor (Lockheed Martin Space Systems Company). First article to be flown in FY06 is FT-04-04 (CMCM-2) • Completed designs, integration, and flight tested countermeasures in support of FT04-2 (CMCM-1) • Completed CM designs in support of FT04-04 (CMCM-2) to be flown in FY06 • Built and characterized countermeasure objects for BMDS flight tests • Conducted design studies to bring CM designs to the Preliminary Design Review-level 			

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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C. Other Program Funding Summary								
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

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D. Acquisition Strategy

Targets and Countermeasures Program will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. To support this strategy, the Targets and Countermeasures Program awarded a ten year prime contract (four year base plus three 2-year option periods) to Lockheed Martin Space Systems Company (LMSSC) who will provide the targets to test against the layered and integrated BMDS. The Targets prime contract will also added a new capability for Targets and Countermeasures systems engineering and provide single system management for the Targets and Countermeasures Program. Overall objectives of this procurement are to deliver reliable target system performance, to provide system level engineering and management through an integrated prime contractor, to reduce target acquisition cycle time, to control target program costs and stimulate creative cost reduction initiatives, and to focus on components and capability-based product lines through integration and launch of target systems. The contract structure allows for maximum flexibility to produce either full blown up targets to test new concepts and ideas, or product lines under which common target components will be developed, integrated, and tested. By emphasizing common target components, it is anticipated that a reduction in both cycle time and cost will be achieved. The government will maintain system responsibility and will ensure successful management of BMDS targets execution.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)								
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Systems Engineering								
Systems Engineering	C/CPAF	Lockheed Martin/ Denver, CO	90,368	0	N/A	0	N/A	90,368
Systems Engineering Support	C/FFRDC	John Hopkins Applied Research Lab/ Maryland	2,427	0	N/A	0	N/A	2,427
Systems Engineering Support	C/CPFF	SAIC/ San Diego, CA	400	0	N/A	0	N/A	400
Launch Vehicles								
Launch Vehicles	C/CPFF	Aerojet/ Rancho Cordova, CA	2,493	0	N/A	0	N/A	2,493
Launch Vehicles	C/CPAF	Northrop Grumman/ Albuquerque, NM	749	0	N/A	0	N/A	749
Launch Vehicles	C/CPIF	Orbital/ Chandler, AZ	174	0	N/A	0	N/A	174
Launch Vehicles	C/CPAF	Lockheed Martin Space Systems/ Denver, CO	10,341	0	N/A	0	N/A	10,341
Launch Vehicles	C/MIPR	OO-AL/ Hill AFB, UT	504	0	N/A	0	N/A	504
			0	0	N/A	0	N/A	
Data and Instrumentation								
Data & Instrumentation	C/MIPR	DoD/WHS/ Washington, DC	258	0	N/A	0	N/A	258
Data & Instrumentation	C/MIPR	NAWC/ Point Magu, CA	592	0	N/A	0	N/A	592

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis						Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/Oblg Date	FY 2007 Cost	FY 2007 Award/Oblg Date	Total Cost
Data & Instrumentation	C/CPFF	Interstate Electronics Corp/ Anaheim, CA	1,881	0	N/A	0	N/A	1,881
Data & Instrumentation	C/CPIF	Orbital/ Chandler, AZ	100	0	N/A	0	N/A	100
Data & Instrumentation	C/FFRDC	Sandia National Lab/ Albuquerque, NM	12,278	0	N/A	0	N/A	12,278
Data & Instrumentation	C/FFRDC	MIT/Lincoln Lab/ Boston, MA	4,242	0	N/A	0	N/A	4,242
Data & Instrumentation	C/CPFF	Fibertek/ Herndon, VA	1,380	0	N/A	0	N/A	1,380
Data & Instrumentation	C/Variou	Various/ Albuquerque, NM	180	0	N/A	0	N/A	180
Data & Instrumentation	C/FFP	Mayflower Incorporated/ Reading, MA	180	0	N/A	0	N/A	180
Re-entry Vehicles								
Re-Entry Vehicles	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	3,496	0	N/A	0	N/A	3,496
Re-Entry Vehicles	C/CPAF	Lockheed Martin/ Denver, CO	20,850	0	N/A	0	N/A	20,850
Re-Entry Vehicles	C/Variou	Sandia National Lab/ Albuquerque, NM	715	0	N/A	0	N/A	715
Logistics								
Logistics	C/CPFF	Battelle/ Kennesaw, GA	2,834	0	N/A	0	N/A	2,834

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis						Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/Oblg Date	FY 2007 Cost	FY 2007 Award/Oblg Date	Total Cost
Logistics	SS/CPFF	Alliant Techsystems / Magna, UT	908	0	N/A	0	N/A	908
Logistics	SS/CPFF	Physical Science Laboratory/ Las Cruces, NM	806	0	N/A	0	N/A	806
Logistics	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	4,205	0	N/A	0	N/A	4,205
Logistics	MIPR	Various/ Various	4,438	0	N/A	0	N/A	4,438
Mission Management								
Mission Management	C/CPFF	Orbital Sciences Corp/ Chandler, AZ	5,825	0	N/A	0	N/A	5,825
Mission Management	C/CPFF	Interstate Electronics Corp/ Anaheim, CA	30	0	N/A	0	N/A	30
Mission Management	C/CPFF	Boeing/ Canoga Park, CA	18	0	N/A	0	N/A	18
Mission Management	C/FP	Teledyne Solutions/ Huntsville, AL	9,559	0	N/A	0	N/A	9,559
Mission Management	MIPR	Various/ Various	7,010	0	N/A	0	N/A	7,010
Mission Management	C/FFP	AAR/ Elk Grove Village, IL	65	0	N/A	0	N/A	65
Mission Management	C/CPFF	Lockheed Martin/ Huntsville, AL	600	0	N/A	0	N/A	600

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Mission Management	C/FP	Teledyne Solutions/ Huntsville, AL	58	0	N/A	0	N/A	58
Mission Management	MIPR	Various/ Various	6,694	0	N/A	0	N/A	6,694
Mission Assurance	C/Various	Northrop Grumman/ California	9,310	0	N/A	0	N/A	9,310
Countermeasures								
Countermeasure Inventory	C/CPAF	Lockheed Martin/ Denver, Co	3,330	0	N/A	0	N/A	3,330
Countermeasure Development	C/FFRDC	MIT/LL/ Boston, MA	2,145	0	N/A	0	N/A	2,145
Countermeasure Development	C/Various	Sandia National Lab/ New Mexico	3,694	0	N/A	0	N/A	3,694
Countermeasure Development	C/Various	Various/ Various	2,937	0	N/A	0	N/A	2,937
Subtotal Product Development			218,074	0		0		218074

Remarks

Systems Engineering includes \$3 million (FY05) for a Congressional Add which is Earmarked for Scorpius.

Under Logistics and Re-Entry Vehicles, the Teledyne Solutions, Inc. contract is a Command-wide SETA contract.

Under Data and Instrumentation, there is a \$180 thousand effort where performer is identified as various. Three companies are included, Signature Research Associates, National Security Agency, and Teledyne Solutions, Inc.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation								

Remarks

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								

Remarks

Project Total Cost			218,074	0		0		218,074
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Remarks

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Production Milestones																												
GMD Target Development				▲	▲																							
Medium Range Target	▲	▲																										
CDR																												
CMCM - 2		▲																										
Testing Milestones																												
Medium Range Target - RRF Air		▲																										
GMD IFT-13c	◆																											
Aegis FTM 04-1		◆																										
GMD IFT-14		◆																										
CMCM-1 FT 04-2				▲																								
LRALT CD FT 04-5				▲																								
Aegis FTM 04-2					◆																							
THAAD FT-1					◆																							
CMCM-2 FT 04-4						▲																						

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▼	System Level Test (complete)
▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◆	Element Test (planned)
▼	System Level Test (planned)
▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Production Milestones							
GMD Target Development	2Q-4Q						
Medium Range Target	1Q-2Q						
CDR							
CMCM - 2	2Q						
Testing Milestones							
Medium Range Target - RRF Air	2Q						
GMD IFT-13c	1Q						
GMD Target (FT-06-1)	1Q						
Test Bed	1Q-4Q	1Q-3Q					
Aegis FTM 04-1	2Q						
GMD IFT-14	2Q						
CMCM-1 FT 04-2	4Q						
LRALT CD FT 04-5	4Q						
Aegis FTM 04-2		1Q					
THAAD FT-1		1Q					
CMCM-2 FT 04-4		2Q					

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE					
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets					
COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0805 Targets & Countermeasures Block 2006	24,765	224,387	158,987	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2006 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will enhance the BMDS capability by providing short, medium, and long range capability-based targets with enhanced payloads. Based on the Systems Engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target. Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2006 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components.

The targets prime contractor, Lockheed Martin Space Systems Company (LMSSC) will develop all future target configurations with an emphasis on developing product lines of common target components, rather than full-blown individual target systems. LMSSC will maximize the use of existing government furnished equipment, to include the use of Foreign Material Acquisitions (FMA's) when appropriate, while minimizing the number of new developments. LMSSC will optimize the use of existing designs, provide capability-based and common component upgrades, and pursue target portfolio commonality in booster stages, inter stages, avionics, launch support equipment, counter-measures, and re-entry vehicles. It is anticipated this product line approach and target component commonality will reduce both cycle time (e.g., concept definition to launch) and cost.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Systems Engineering	5,625	164,606	98,863
RDT&E Articles (Quantity)	0	0	0

This effort provides the Missile Defense Agency with Target Program Technical Direction and analyzes of target requirements cost, schedule, and technical performance of target systems development. This effort utilizes the spiral development process for long-range plans initiating new developments. Conducts functional allocation to product lines, product line specifications/interfaces and establishes guidelines for the conductivity of design reviews. Performs target system analysis with new concepts to verify system performance. Defines target program baseline, controls flight test configuration, and conducts pre and post-flight analysis and documentation. Identifies treaty and environmental issues and develops plans for

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>issue resolution. Development of the Flexible Target Family (FTF) is an initiative that emphasis commonality and modularity of components that span across target system representations within the family of target sets that can be rapidly integrated to support MDA flight tests. Accordingly, FTF to be composed of Target Sets that exhibit various degrees of threat emulation and have a broad range of performance characteristics and features that present flexible target behavior to test the multiple Ballistic Missile Defense System capabilities.</p> <p>FY05 Accomplishments:</p> <p>Spiral 1 - FTF Launch Vehicle Development</p> <ul style="list-style-type: none">• Development of the Launch Vehicle (LV) 2 Two-Stage Strategic Target System Development of Common Avionics System (CAS)• Development of the Common Support Equipment (CSE)• Development of the Common Transporter Erector (CTE)• Development of the Universal Payload Deployment Module (UPDM)• Development of a new suite of Countermeasures (CM)• Development of the Flexible Target Family (FTF) Long Range Air-Launched Target System (LRALT) <p>FY06 Planned Program:</p> <p>Spiral 1- FTF Launch Vehicle Development:</p> <ul style="list-style-type: none">• Complete development of the LV 2 Two-Stage Strategic Target System• Complete development of the CAS• Complete development of the CSE• Complete development of the CTE• Complete development of the UPDM• Complete the Spiral 1 FTF LRALT System Critical Design Review (CDR) <p>Spiral 2 - FTF Re-Entry Vehicle Design (System Specifications)</p> <ul style="list-style-type: none">• Complete development of the Spiral 2 FTF System Specifications• Spiral 2 Development of Enhanced Capability Products consisting of;<ul style="list-style-type: none">○ Develop new Small Re-Entry Vehicle (RV) to be deployed with LV's in the FTF		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<ul style="list-style-type: none">○ Develop modular dynamic control system and a multi-band RV antenna system with Radar Cross Section signature reduction to be employed on a Modified Ballistic RV and the Small RV○ Conduct engineering design development of a LV second stage thrust termination system.○ Develop a Cold Gas Attitude Control System● Complete Spiral 2 System Requirement Review (SRR) and Preliminary Design Review (PDR) <p>Spiral 3 - FTF Enhanced Studies</p> <ul style="list-style-type: none">● Initiate development of the Spiral 3 FTF System Specification● Initiate Spiral 3 development of Enhanced Capability Products consisting of;<ul style="list-style-type: none">○ Modification of Infrared and Radar Cross Section for RV endo and last stage○ Technology transfer of CM's, sensors, and advanced instrumentation○ Small RV instrumentation module● Complete Spiral 3 SRR● Complete Spiral 3 Functional Allocation and Interface Definition● Complete Rolling Wave III Integrated Baseline Review● Support FTF contractual acquisition actions with the Target and Countermeasures Prime Contractor Lockheed Martin Space Systems Company (LMSSC)● Provide Target Systems Analysis of BMDS Block 06 flight tests <p>FY07 Planned Program:</p> <p>Spiral 2 - FTF Re-Entry Vehicle Design (System Specifications)</p> <ul style="list-style-type: none">● Complete Spiral 2 Development of Enhanced Capability Products<ul style="list-style-type: none">○ Complete development of new Small Re-Entry Vehicle to be deployed with all LV's in the FTF○ Complete development modular dynamic control system and a multi-band RV antenna system with Radar Cross Section signature reduction to be employed on a Modified Ballistic RV and the Small RV○ Complete design of a LV second stage thrust termination system○ Complete development of a Cold Gas Attitude Control System● Complete Spiral 2 CDR		

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Spiral 3 - FTF Enhanced Studies

- Complete development of the Spiral 3 FTF System Specification
- Continue Spiral 3 Development of Enhanced Capability Products;
 - Continued development of modification of Infrared and Radar Cross Section for RV in endo and last stage
 - Continued development of technology transfer of countermeasure, sensors, and advanced instrumentation
 - Continued development of Small RV instrumentation module
- Complete Rolling Wave IV Integrated Baseline Review
- Complete Spiral 3 PDR
- Complete Spiral 3 Functional Allocation and Interface Definition
- Continue to support FTF acquisition actions with the Target and Countermeasures Prime Contractor (LMSSC)
- Provide Target Systems Analysis of Block 06 flight tests

	FY 2005	FY 2006	FY 2007
Launch Vehicles	2,375	3,500	13,202
RDT&E Articles (Quantity)	0	0	0

This effort provides MDA with all launch delivery vehicles including boosters, interstages and avionics (guidance and flight computers). This task includes conducting decomposition for booster, inter-stage and avionics requirements, characterizing and qualifying boosters, interstages, and avionics.

FY05 Accomplishments:

- Developed and definitized Launch Vehicle common equipment and common vehicles for the Flexible Targets Family (FTF)
- Procurement of two (2) Flex Seal Nozzles

FY06 Planned Program:

- Support contractual procurement actions with the Targets and Countermeasures (TC) Prime Contractor, Lockheed Martin Space Systems Company (LMSSC)

FY07 Planned Program:

- Procurement of five (5) SR-73 boosters for the BMDS flight missions NFIRE 2a / 2b
- Provide acquisition support for booster procurement
- Support contractual procurement actions with TC's Prime Contractor, LMSSC

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RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets	
	FY 2005	FY 2006	FY 2007
Data and Instrumentation	885	7,914	3,147
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides funding for program management and development of: 1) unique target instrumentation as well as optical on-target data collection instrumentation used for algorithm development/evaluation, intercept viewing and payload characterization; 2) development of Midcourse Fly Along Sensor Package (M-FASP) flight units for BMDS testing; and 3) development of advanced instrumentation systems/techniques to include data collection and transmission techniques.</p> <p>FY05 Accomplishments:</p> <ul style="list-style-type: none"> • Completed 1 M-FASP qualification unit and flew 1 M-FASP flight unit • Completed development of auxiliary sensor unit, ILC Aug 05 • Development of advanced sensors for integration into M-FASPs (High Speed Camera, auxiliary sensor) • Completed development of an early prototype Wireless LAN system for initial testing • Initiated development of direct to satellite telemetry • Initiated development of Sensor Pointing Platform (SPP) (Target and Countermeasures Observation System (TCOS) PDM Pointer) • Initiated development of advanced instrumentation and telemetry concepts. • Analyzed antenna technologies for providing multi-band capabilities with minimal Infrared (IR) and Radio Frequency (RF) signature effects on reentry vehicles <p>FY06 Planned Program:</p> <ul style="list-style-type: none"> • Fly early prototype Wireless LAN system on CMCM-2 for operational testing • Complete development and implement new techniques data telemetry during flight tests • Continue development of SPP • Continue development of advanced instrumentation and telemetry concepts. • Analyze miniaturized guidance navigation control technologies for size and weight reduction needs • Complete development of advanced Wireless LAN and fly risk reduction flight (CMCM-2) • Continue development of direct to satellite telemetry • Standardize instrumentation across Product Lines for Telemetry, avionics, Flight Termination/Command Destruct Systems, and GPS 			

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FY07 Planned Program:

- Complete development of SPP
- Produce two SPP units; one for qualification testing, second for risk reduction flight in FY07
- Continue development of advanced instrumentation and telemetry concepts
- Pursue new technologies for data compression and bandwidth reductions in telemetry links

	FY 2005	FY 2006	FY 2007
Countermeasures	8,420	3,780	1,750
RDT&E Articles (Quantity)	0	0	0

This effort provides: 1) Program management and development of prototype countermeasure systems used to test the capability space of the BMDS; 2) Integration of countermeasure systems on BMDS flight tests; and 3) Characterization and ground testing of countermeasure systems. Supports requirements decomposition and analysis as applicable for the countermeasures activities. Conducts and supports necessary design reviews to ensure mission assurance while ensuring all Countermeasure (CM) hardware adhere to interface specifications. Also the funding goes to support pre- and post-mission data analysis regarding countermeasures.

FY05 Accomplishments:

- Initiated development of a countermeasure inventory in support of BMDS Flight Tests

FY06 Planned Program:

- Transition-to-limited-production several countermeasure designs from the National Labs to the Targets and Countermeasures Prime Contractor Lockheed Martin Space Systems Company (LMSSC)
- Develop techniques, materials, and processes for new prototype countermeasures.
- Conduct studies to enable countermeasures engineering designs to be brought to the Critical Design Review-level
- Develop a countermeasure inventory in support of BMDS flight tests
- Develop prototype, build, and characterize countermeasure objects in support of BMDS system testing

FY07 Planned Program:

- Transition-to-limited-production several countermeasure designs from the National Labs to the Targets and Countermeasures Prime Contractor LMSSC
- Continue to develop techniques, materials and processes for new prototype countermeasures.

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- Conduct design studies to bring countermeasures designs to the Critical Design Review-level
- Continue the development of a countermeasure inventory in support of BMDS flight tests
- Develop, prototype, build and characterize countermeasure objects in support of BMDS system testing

	FY 2005	FY 2006	FY 2007
Logistics	2,460	11,151	10,013
RDT&E Articles (Quantity)	0	0	0

This effort provides MDA with all required inventory, launch support equipment, and transportation of targets and countermeasures hardware in support of BMDS testing. These efforts are essential in providing a dependable and accurate target system that BMDS has come to and continues to rely on for the success of their interceptor program. The continued success of these programs is vital for continued national security. This task includes integrated logistics support for all targets and countermeasure material, including facilities, inventory maintenance, spare parts, aging and surveillance, as well as special testing for target rocket motor propellants and other hazardous material handling. This task provides for the management and execution of the Consolidated Missile Asset Reuse for Targets (CMART) Program and provides all required facilities and monitoring for explosive storage and Foreign Military Assets fuel calibration and storage.

FY05 Accomplishments:

- Initiated design and development efforts for the Common Transporter Erector System (CTES)
- Performed design modifications for C-4 processing

FY06 Planned Program:

- Storage, maintenance, and aging and surveillance program for 84 Pershing II Reentry Vehicles and other components, 103 Lance Missiles, 17 Polaris A-3 motors, 12 Orbus motors, Minuteman motors, 14 FMA's and 7 Castor IVB motors
- Maintenance of existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex, and Pacific Missile Range Facility
- Procurement of (4) assembled Castor IV motors using GFE cases to support future MRT missions
- Procurement of Trident C-4 motors for future use as targets: (144) 1st stage; (72) 2nd stage; (36) 3rd stage
- Refurbish, assemble, and delivery of;
 - Two (2) SR-19 motors and associated equipment and deliver for test flight
 - Three (3) Castor IVB motors and associated equipment for test flights
 - Two (2) Hera targets and associated equipment for test flights

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- Five (5) Lance Missiles and associated equipment for test flights
- Three (3) FMA Missiles and associated equipment for test flights.
- Three (3) Strategic Target System (STARS) targets and associated equipment for test flights
- Procurement of additional Foreign Military Assets to support future target flight tests
- Procure domestic Inhibited Red Fuming Nitric Acid (IRFNA) for the FMA target program

FY07 Planned Program:

- Storage, maintenance, and aging and surveillance program for 84 Pershing II Reentry Vehicles and other components, 99 Lance Missiles, 16 Polaris A-3 motors, 6 Orbus motors, Minuteman motors, 13 FMA's and 7 Castor IVB motors
- Maintenance of existing support equipment and facilities at Redstone Arsenal, White Sands Missile Range, Kodiak Launch Complex, and Pacific Missile Range Facility
- Store and maintain Trident C-4 motors for future use as targets
- Refurbish, assemble, and delivery of;
 - Two (2) TLV motor sets and associated equipment and deliver for test flight
 - Four (4) Castor IVB motors and associated equipment for test flights
 - Three (3) Hera targets and associated equipment for test flights
 - Two (2) FMA Missiles and associated equipment for test flights
 - Four (4) STARS targets and associated equipment for test flights
 - Five (5) LV2 targets and associated equipment for test flights
- Initiate procurement of assembled Castor IV motors using GFE cases to support future MRT missions

	FY 2005	FY 2006	FY 2007
Integration	5,000	11,500	12,056
RDT&E Articles (Quantity)	0	0	0

This effort provides MDA with all target configuration, integration, launch services and mission assurance in support of BMDS testing. This task includes developing of flight safety documentation, conducting trajectory flyout analysis, supporting environmental studies and reviews. Integrates product line components into designated target configuration and tests systems. Provides schedule status, final target checkout, target launch services for mission assurance.

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FY05 Accomplishments:

- Initiated and identified requirements of a single common integration facility for integration of all targets for the BMDS

FY06 Planned Program:

- Provide mission assurance for hardware integration for BMDS element targets in support of FY06 tests
- Integrate product line components into designated target configuration and tests systems to support FY06 tests
- Manage target development on legacy contracts
- Manage integration services of the TC Prime contract, Lockheed Martin Space Systems Company (LMSSC)
- Provide development efforts on the single central integration facility

FY07 Planned Program:

- Provide mission assurance for hardware integration for all BMDS element targets in support of FY07 tests
- Manage integration services of the TC Prime contract with LMSSC
- Provide support for the single central integration facility
- Manage target integration services on older legacy contracts

	FY 2005	FY 2006	FY 2007
Mission Management	0	10,078	12,449
RDT&E Articles (Quantity)	0	0	0

This effort provides MDA with target mission management and execution for overall mission assurance. Conducts mission planning , documentation, development of scenario plans in accordance with mission requirements. Controls target management (scheduling, configuration modifications) in support of BMDS and Element testing. Conduct safety operations specific to the mission and in conjunction with ranges. Plans and conducts target Mission readiness reviews and monitors environmental execution.

FY06 Planned Program:

- Conduct any remaining retrograde or analysis activities associated with the GMD LRALT mission
- Prepare for, conduct, and analyze;
 - ABL Lance Target Missile System (LTMS) launch
 - Aegis-BMD target missions (FTM-04-2 (1Qtr), FTM-04-3 (2Qtr), FTM 06-1a/b (3Qtr)
 - GMD target missions (FT -04-1 (2Qtr), FT-3 (2Qtr), FT-4 (4Qtr)

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- NFIRE-2a mission
- THAAD target missions (FT-3 (2Qtr), FT-4 (3Qtr))
- CMCM 2a (3Qtr) and CMCM 2b (3Qtr)
- TLV5 (2Qtr)
- Prepare for and analyze pre-mission activities NFIRE-2a and NFIRE 2b

FY07 Planned Program:

- Prepare for, conduct and analyze tests as shown in attached R-4 and R-4A.

	FY 2005	FY 2006	FY 2007
Re-entry Vehicles	0	11,858	7,507
RDT&E Articles (Quantity)	0	0	0

This effort provides MDA with the design, development, build, and delivery of all Reentry Vehicle (RV) and Payload Deployment Module (PDM) products for MDA and the Ballistic Missile Defense System (BMDS). Includes RV and PDM requirements decomposition and analysis; RV and PDM characterization, qualification, and performance measurements; mission support; and pre-and post-mission data analysis. Provides interface standardization and ensures product adherence to interface specifications for successful integration and launch of RV and PDM products. Conducts RV and PDM design reviews and supports other product design reviews to provide product and mission assurance.

FY06 Planned Program:

- Complete buildup and delivery of: Two (2) Ballistic Reentry Vehicles (BRVs) for FTT-3 and FTT-4 missions One (1) MBRV-1 for ATM-48 mission with one (1) BCE Six (6) MBRV-2s for FTM-04-2, FT-04-4a/b, FTM-06-1, FT-4, and FT-5 missions, including two (2) with BCLFS and three (3) with PDMs Four (4) MBRV-3s for FTT-06-1, FTT-06-2, FTT-06-3, FT-16-2, missions, plus one (1) rolling spare for THAAD One (1) Tactical Target Vehicle (TTV) for FTM-06-2 mission Three (3) GROW RVs with three (3) PDMs for FT-04-1, FT-2, and FT-3 missions to support BMDS testing
- Exercise contractual actions for procurement of three (3) new-build MBRV-3s to support LPTO testing and one (1) new-build MBRV-3 to support future BMDS testing Develop and initiate acquisition strategy for procurement of six (6) SRVs and six (6) PDMs to support GMD testing Support Spiral Development activities

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FY07 Planned Program:

- Complete buildup and delivery of: Three (3) MBRV-1s for FTT-08-1, FTT-08-2, and FTT-08-4 missions Seven (7) MBRV-2s for FTM-06-3, FT-6, JBMD-1, FTT-06-4, FTT-06-5, FTT-06-6, and SPT-06 missions Two (2) MBRV-3s for FT-7-2 and FT-7-3 missions to support BMDS testing
- Initiate contractual actions for: Delivery of five (5) OEM RVs to support ABL testing Procurement of ten (10) new-design MBRV-2s to support ABL, Aegis BMD, KEI, STSS, and THAAD testing Procurement of three (3) new-build MBRV-3s to support BMDS testing Procurement of three (3) MBRV-4s to support THAAD testing
- Support Spiral Development activities

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682

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APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				0603888C Ballistic Missile Defense Test and Targets				

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. The targets prime contractor will continue to emphasize target product lines that develop target components such as booster stages, avionics, countermeasures, etc. As target developments and existing contracts are completed under Project 0705 (Block 2004), the prime contractor will optimize target designs and developments completed for Block 2004 and incorporate them as necessary to support Block 2006 development. The prime contractor will also continue to provide capability-based and commonality target upgrades, as well as pursue target portfolio commonality in order to reduce cycle time and cost of BMDS target systems. Under this Project (0805), the four year base period of performance will expire. The government will either exercise the first option to continue with the prime, or re-compete the effort. As with Project 0705 (Block 2004), the government will continue to maintain system responsibility and will ensure successful management of targets execution.

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I. Product Development Cost (\$ in Thousands)								
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Systems Engineering								
System Engineering	C/CPAF	Lockheed Martin/ Denver, CO	5,625	143,406	1/4Q	91,541	1/4Q	240,572
System Engineering Support	C/FFRDC	John Hopkins Applied Research Lab/ Maryland	0	2,200	1/4Q	2,322	1/4Q	4,522
System Engineering Support	C/Various	Various/ Various	0	19,000	1/4Q	5,000	1/4Q	24,000
Launch Vehicles								
Launch Vehicles	C/CPAF	Lockheed Martin Space Systems/ Denver, CO	2,375	0	N/A	0	N/A	2,375
Launch Vehicles	C/CPAF	Northrop Grumman/ Albuquerque, NM	0	2,500	1/2Q	3,685	1/2Q	6,185
Launch Vehicles	C/CPAF	Northrop Grumman/ Ogden, UT	0	1,000	1/2Q	0	N/A	1,000
Launch Vehicles	C/MIPR	AFSPCOM/ Peterson AFB, CO	0	0	N/A	9,517	1/2Q	9,517
Data and Instrumentation								
Data & Instrumentation	C/CPFF	Fibertek/ Herndon, VA	0	242	2Q	0	N/A	242
Data & Instrumentation	C/MIPR	DoD/WHS/ Washington, DC	0	200	2/4Q	327	2/4Q	527
Data & Instrumentation	C/CPFF	SRA/ Huntsville, AL	800	0	N/A	0	N/A	800

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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Data & Instrumentation	C	Colorado Springs, CO	85	0	N/A	0	N/A	85
Data & Instrumentation	C/FFRDC	Sandia National Lab/ Albuquerque, NM	0	7,472	2/3Q	2,820	1/3Q	10,292
Countermeasures								
Countermeasures Development	C/FFRDC	MIT/LL/ Boston, MA	0	650	1/4Q	500	1/4Q	1,150
Countermeasures Development	C/Various	Sandia National Lab/ New Mexico	5,775	500	1/4Q	500	1/4Q	6,775
Countermeasures Development	C/Various	Various/ Various	2,645	2,630	1/4Q	750	1/4Q	6,025
Logistics								
Logistics	C/CPFF	Battelle/ Kennesaw, GA	0	1,950	1Q	2,955	1Q	4,905
Logistics	SS/CPFF	Alliant Techsystems/ Magna, UT	0	300	1Q	317	1Q	617
Logistics	SS/CPFF	Physical Science Laboratory/ Las Cruces, NM	0	438	1Q	536	1Q	974
Logistics	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	0	2,682	1/2Q	2,955	1/2Q	5,637
Logistics	MIPR	Various/ Various	0	1,781	1/3Q	357	1/3Q	2,138
Logistics	C/Various	Various/ Albuquerque, NM	0	4,000	1/2Q	2,893	1/2Q	6,893

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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Logistics	C/CPAF	Lockheed Martin/ Denver, CO	1,850	0	N/A	0	N/A	1,850
Logistics	MIPR	SWFPAC/ Bangor, WA	610	0	N/A	0	N/A	610
Integration								
Integration	Various	Integration Facility/ Albuquerque, NM	5,000	0	N/A	0	N/A	5,000
Integration	C/CPAF	Northrop Grumman/ Albuquerque, NM	0	11,500	1/2Q	12,056	1/2Q	23,556
Mission Management								
Mission Management	C/FP	Teledyne Solutions/ Huntsville, AL	0	9,703	1/2Q	12,053	1/2Q	21,756
Mission Management	MIPR	Various/ Various	0	375	1/2Q	396	N/A	771
Re-entry Vehicles								
Re-Entry Vehicles	C/FP	Teledyne Solutions, Inc./ Huntsville, AL	0	2,150	1/2Q	1,795	1/2Q	3,945
Re-Entry Vehicles	C/FFRDC	Sandia National Lab/ Albuquerque, NM	0	2,500	1/2Q	0	N/A	2,500
Re-Entry Vehicles	C/CPAF	Lockheed Martin/ Denver, CO	0	7,208	1/2Q	5,712	1/2Q	12,920
Subtotal Product Development			24,765	224,387		158,987		408139

Remarks

Under Logistics and Re-Entry Vehicles, the Teledyne Solutions, Inc., contract is a Command-wide SETA contract.

II. Support Costs Cost (\$ in Thousands)

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation								

Remarks

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								

Remarks

Project Total Cost			24,765	224,387		158,987		408,139
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Remarks

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development Milestones																												
FTF-1			▲	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Countermeasures					▲	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Instrumentation					▲	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PLTSD Spiral 2					▲	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Testing Milestones																												
SBT-RRF					▲																							
GMD FT 04-1						◆																						
ABL LPS							◆																					
ABL Lance 2							◆																					
Aegis FTM 06-1							◆																					
GMD FTG-2							◆																					
SBT #1,2,3,4							◆																					
GMD FTG-3								◆																				
THAAD FT-3								◆																				
THAAD FTT-04								◆																				
Aegis FTM 06-2									◆																			
Legend																												
▲	Significant Event (complete)																	▲	Significant Event (planned)									
★	Milestone Decision (complete)																	★	Milestone Decision (planned)									
◆	Element Test (complete)																	◆	Element Test (planned)									
▼	System Level Test (complete)																	▼	System Level Test (planned)									
▲—▲	Complete Activity																	▲—▲	Planned Activity									

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Testing Milestones																												
GMD FTG-4												◆																
THAAD FTT 06-1												◆																
GMD FTG-6												◆																
THAAD FTT 06-2												◆																

Legend	
	Significant Event (complete)
	Milestone Decision (complete)
	Element Test (complete)
	System Level Test (complete)
	Complete Activity
	Significant Event (planned)
	Milestone Decision (planned)
	Element Test (planned)
	System Level Test (planned)
	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail					Date February 2006		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Development Milestones							
FTF-1	3Q-4Q	1Q-4Q	1Q-4Q				
Countermeasures		1Q-4Q	1Q-4Q				
Instrumentation		1Q-4Q	1Q-4Q				
PLTSD Spiral 2		1Q-4Q	1Q-4Q				
Testing Milestones							
SBT-RRF		1Q					
GMD FT 04-1		2Q					
ABL LPS		3Q					
ABL Lance 2		3Q					
Aegis FTM 06-1		3Q					
GMD FTG-2		3Q					
SBT #1,2,3,4		3Q					
GMD FTG-3		4Q					
THAAD FT-3		4Q					
THAAD FTT-04		4Q					
Aegis FTM 06-2			1Q				
GMD FTG-4			1Q				
THAAD FTT 06-1			1Q				
GMD FTG-6			2Q				
THAAD FTT 06-2			2Q				

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE					
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets					
COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0905 Targets & Countermeasures Block 2008	0	4,226	20,533	173,533	151,327	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2008 integrated and layered Ballistic Missile Defense Systems (BMDS) testing. Targets developed under this project will test and enhance the BMDS capability by providing short, medium, and long range capability based targets with more complex payloads. Based on system engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target. Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2008 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components. This program also provides the technical support of mission management for Element flight tests. Similar to Project 0805 (Block 06), this Project (0905) will continue to rely upon the targets prime contractor, Lockheed Martin Space Systems Company (LMSSC) to develop new target systems, as well as develop product lines of common target components. Existing designs, government furnished equipment, and Foreign Material Acquisition (FMA's) will continue to be utilized as necessary to minimize new developments, contain costs, and reduce cycle time.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Systems Engineering	0	0	7,930
RDT&E Articles (Quantity)	0	0	0

This effort provides the Missile Defense Agency with Target Program Technical Direction and analyze of target requirements cost, schedule, technical performance of target systems development. This effort utilizes the spiral development process for long-range plans initiating new developments. Conducts functional allocation to product lines, product line specifications/interfaces and establishes guidelines for conductibility of design reviews. Performs target system analysis with new concepts to verify system performance. Defines target program baseline, control flight test configuration, and conduct pre and post-flight analysis and documentation. Identifies treaty and environmental issues and develops plans for issue resolution. The Flexible Targets Family (FTF) will be composed of Target Sets that exhibit various degrees of threat emulation and have a broad range of performance characteristics and features that present flexible target behavior to test the multiple Ballistic Missile Defense System capabilities.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	
<p>FY07 Planned Program:</p> <p>Spiral 3 - FTF Enhanced Studies (Development of Enhanced Capability Products)</p> <ul style="list-style-type: none"> • Develop modification of Infrared and Radar Cross Section for Re-Entry Vehicles in endo and last stage • Develop technology transfer of countermeasures, sensors, and advanced instrumentation • Develop Small Re-Entry Vehicle instrumentation module • Provide contract acquisition support for the FTF 			
	FY 2005	FY 2006	FY 2007
Data and Instrumentation	0	976	6,853
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides funding for program management and development of: 1) unique target instrumentation as well as optical on-target data collection instrumentation used for algorithm development/evaluation and payload characterization; 2) development of Spatially Diverse Sensor (SDS) flight units for BMDS testing; and 3) and development of advanced instrumentation systems/techniques to include data collection and transmission techniques.</p> <p>FY06 Planned Program:</p> <ul style="list-style-type: none"> • Initiate development of SDS platform (next generation M-FASP (Mid Course Fly Along Sensor Package)) <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Complete engineering development of SDS • Initiate production of SDS • Demonstration flight for direct to Satellite Telemetry capability • Develop Communications Security (COMSEC) procedures for inventory encryption 			

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)		0603888C Ballistic Missile Defense Test and Targets	
	FY 2005	FY 2006	FY 2007
Countermeasures	0	3,250	5,750
RDT&E Articles (Quantity)	0	0	0
<p>This effort provides program management and development of various countermeasure systems for BMDS flight testing, including characterization and ground testing of those countermeasure systems.</p> <p>FY06 Planned Program:</p> <ul style="list-style-type: none"> • Transition-to-limited-production several countermeasure designs from the National Labs to the Targets and Countermeasures Prime Contractor Lockheed Martin Space Systems Command (LMSSC) • Develop techniques, materials, and processes for new prototype countermeasures • Conduct design studies to bring countermeasures designs to the Critical Design Review-level • Develop prototype, build and characterize countermeasure objects in support of BMDS system testing <p>FY07 Planned Program:</p> <ul style="list-style-type: none"> • Continue the transition-to-limited-production for several countermeasure designs from the National Labs to the Targets and Countermeasures Prime Contractor LMSSC • Follow on developmental techniques for new prototype countermeasures performed in conjunction with developmental testing of prototypes • Evolve countermeasure prototypes towards flight qualification based on considerable flight qualification test activities (based on FTF environments) • Build variety of engineering countermeasure prototypes in support of BMDS system testing 			

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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C. Other Program Funding Summary								
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		Date February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets	

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. The targets prime contractor will continue to develop targets for use in MDA BMDS testing, with a continued emphasis on product line development and target component commonality. It is expected that the prime contractor will continue to refine and streamline the activities for which it is under contract, and as described in Section A of this Project. Under this Project (0905), the first two year option period of performance, for the prime contractor will expire, and the government will either exercise a second two year option, or re-compete the effort. As with Project 0805 (Block 2006), the government will continue to maintain system responsibility and will ensure successful management of targets execution.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Systems Engineering								
System Engineering	C/CPAF	Lockheed Martin Space Systems/ Denver, CO	0	0	N/A	7,930	1/4Q	7,930
Data and Instrumentation								
Data & Instrumentation	C/CPAF	Lockheed Martin Space Systems/ Denver, CO	0	976	1/4Q	5,827	1/4Q	6,803
Data & Instrumentation	C/FFRDC	Sandia National Lab/ Albuquerque, NM	0	0	N/A	127	2Q	127
Data & Instrumentation	C/VariouS	Various/ Various	0	0	N/A	370	N/A	370
Data & Instrumentation	C/MIPR	NSA/ Ft. Meade, MD	0	0	N/A	529	N/A	529
Countermeasures								
Countermeasures Development	C/FFRDC	MIT/LL/ Boston, MA	0	0	N/A	500	1/4Q	500
Countermeasures Development	C/VariouS	Sandia National Lab/ New Mexico	0	3,250	N/A	3,750	1/4Q	7,000
Various	C/VariouS	Various/ Various	0	0	1/4Q	1,500	1/4Q	1,500
Subtotal Product Development			0	4,226		20,533		24759

Remarks

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation								

Remarks

IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								

Remarks

Project Total Cost			0	4,226		20,533		24,759
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Remarks

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development Milestones																												
Instrumentation																												
Countermeasures																												
Flexible Target Family																												
Testing Milestones																												
THAAD FTT 06-3																												
THAAD FTT 06-4																												
THAAD FTT 06-5																												
Aegis FTM 06-4																												
GMD FTG-8																												
PAC-3 FT 7-3																												
STSS SPT-06																												
STSS SPT-10																												
THAAD FTT 06-6																												
ABL																												
STSS SPT-16																												
THAAD FTT 08-1																												

Legend	
	Significant Event (complete)
	Milestone Decision (complete)
	Element Test (complete)
	System Level Test (complete)
	Complete Activity
	Significant Event (planned)
	Milestone Decision (planned)
	Element Test (planned)
	System Level Test (planned)
	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Testing Milestones																												
Aegis FTM 08-1															◇													
Arrow USFT-3															◇													
Arrow USFT-4															◇													
CMCM-6															◇													
GMD FTG 08-4															◇													
THAAD FTT 08-2																◇												
PAC-3 FT-16-2																	◇											
THAAD FTT 08-3																		◇										
Aegis FTM 08-2																			◇									
Aegis FTM 08-3																				◇								
GMD FTG 08-5A/B																					◇							
GMD FTG 10-1																						◇						
THAAD FTT 08-4																						◇						
STSS 08-8																											◇	

Legend	
▲	Significant Event (complete)
★	Milestone Decision (complete)
◆	Element Test (complete)
▼	System Level Test (complete)
▲	Complete Activity
▲	Significant Event (planned)
★	Milestone Decision (planned)
◇	Element Test (planned)
▼	System Level Test (planned)
▲	Planned Activity

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Development Milestones							
Instrumentation				1Q-4Q	1Q-4Q		
Countermeasures				1Q-4Q	1Q-4Q		
Flexible Target Family				1Q-4Q	1Q-4Q		
Testing Milestones							
THAAD FTT 06-3			3Q				
THAAD FTT 06-4			4Q				
THAAD FTT 06-5			4Q				
Aegis FTM 06-4				1Q			
GMD FTG-8				1Q			
PAC-3 FT 7-3				1Q			
STSS SPT-06				1Q			
STSS SPT-10				1Q			
THAAD FTT 06-6				1Q			
ABL				2Q,3Q,3Q	1Q,2Q,3Q		
STSS SPT-16				2Q			
THAAD FTT 08-1				2Q			
Aegis FTM 08-1				3Q			
Arrow USFT-3				3Q			
Arrow USFT-4				3Q			
CMCM-6				3Q			
GMD FTG 08-4				3Q			
THAAD FTT 08-2				4Q			
PAC-3 FT-16-2					1Q		
THAAD FTT 08-3					2Q		
Aegis FTM 08-2					3Q		
Aegis FTM 08-3					3Q		
GMD FTG 08-5A/B					4Q		
GMD FTG 10-1					4Q		
THAAD FTT 08-4					4Q		
STSS 08-8						1Q	

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets						
COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0005 Targets & Countermeasures Block 2010	0	500	2,500	5,353	41,721	191,425	162,878
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2010 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will test and enhance the BMDS capability by providing short, medium, and long range capability based targets with more complex payloads. Based on systems engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target.

Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2010 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components. This effort provides funding for program management and the development of various countermeasures for BMDS flight testing, including characterization and ground testing of those countermeasure systems. This program also provides the technical support of mission management/mission assurance for all Element flight tests and advanced development for long range strategic targets. Similar to Project 0905 (Block 08), this Project (0005) will continue to rely upon the targets prime contractor to develop new target systems, as well as develop product lines of common target components. Existing designs, government furnished equipment, and Foreign Material Acquisition (FMA's) will continue to be utilized as necessary to minimize new developments, contain costs, and reduce cycle time.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Countermeasures	0	500	2,500
RDT&E Articles (Quantity)	0	0	0

This effort provides funding for program management and development of countermeasure systems for BMDS flight testing, including characterization and ground testing of those countermeasure systems.

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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FY06 Planned Program

- Develop and characterize countermeasure objects in support of BMDS system testing.

FY07 Planned Program:

- Increase engineering development and prototyping builds of advanced countermeasure objects
- Significant developmental and flight qualification testing of countermeasures in support of CMCM-4

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
PE Army Natl Guard Operations and Maintenance	0	155	151	150	154	164	167	941
PE Navy Operations and Maintenance	11,300	12,900	24,100	24,400	24,600	23,300	23,700	144,300
PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
PE PAC-3/MEADS RDT&E	344,978	304,973	336,959	465,395	521,791	522,418	502,961	2,999,475

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks. The targets prime contractor will continue to develop targets for use in MDA BMDS testing, with a continued emphasis on product line development and target component commonality. It is expected that the prime contractor will continue to refine and streamline the activities for which it is under contract. Under this Project (0005), the second two year option period of performance, for the prime contractor will expire, and the government will either exercise a third two year option, or re-compete the effort. As with Projects 0805 (Block 2006) and 0905 (Block 2008), the government will continue to maintain system responsibility and will ensure successful management of targets execution.

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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I. Product Development Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Countermeasures								
Countermeasures Development	C/FFRDC	MIT/LL/ Boston, MA	0	500	1/4Q	2,500	1/4Q	3,000
Subtotal Product Development			0	500		2,500		3000

Remarks

II. Support Costs Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Support Costs								

Remarks

III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Test and Evaluation								

Remarks

Remarks

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Missile Defense Agency (MDA) Exhibit R-3 RDT&E Project Cost Analysis	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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IV. Management Services Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award/ Oblg Date	FY 2007 Cost	FY 2007 Award/ Oblg Date	Total Cost
Subtotal Management Services								

Remarks

Project Total Cost			0	500		2,500		3,000
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Remarks

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Missile Defense Agency (MDA) Exhibit R-4A Schedule Detail						Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Testing Milestones							
ABL						1Q-4Q	1Q-4Q
AEGIS						1Q-4Q	1Q-4Q
Arrow						1Q-4Q	1Q-4Q
CMCM						1Q-4Q	1Q-4Q
GMD						1Q-4Q	1Q-2Q
KEI						1Q-4Q	1Q-4Q
PAC-3						1Q-4Q	1Q-4Q
STSS						1Q-4Q	1Q-4Q
THAAD						1Q-4Q	1Q-4Q
Development Milestones							
Countermeasures						1Q-4Q	1Q-4Q
Instrumentation						1Q-4Q	1Q-4Q
Target Development						1Q-4Q	1Q-4Q

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets						
COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
R105 Targets & Countermeasures Block 2012	0	0	0	0	0	6,000	39,181
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Targets and Countermeasures program provides capability-based targets to support Block 2012 integrated and layered Ballistic Missile Defense System (BMDS) testing. Targets developed under this project will test and enhance the BMDS capability by providing short, medium, and long range capability based targets with more complex payloads. Based on systems engineering assessments of possible threat scenarios, the targets and countermeasures program supports the Engagement Sequence Group (ESG) by launching targets to test the performance of the BMDS, ultimately enabling a weapon to engage a target.

Funding for this program supports the continuation of targets prime contract activities, and the design, prototyping, development, certification, product improvement, and qualification testing of BMDS Block 2012 targets and associated payloads. It also supports the maintenance, aging surveillance, refurbishment, and routine testing of existing government furnished equipment (GFE) boosters, as well as the purchase of long lead material assets and asset management items for short, medium and long-range target components. This effort provides funding for program management and the development of various countermeasures for BMDS flight testing, including characterization and ground testing of those countermeasure systems. This program also provides the technical support of mission management/mission assurance for all Element flight tests and advanced development for long range strategic targets. Similar to Project 0005 (Block 2010), this Project (R105) will continue to rely upon the targets prime contractor to develop new target systems, as well as develop product lines of common target components. Existing designs, government furnished equipment, and Foreign Material Acquisition (FMA's) will continue to be utilized as necessary to minimize new developments, contain costs, and reduce cycle time.

C. Other Program Funding Summary

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603175C Ballistic Missile Defense Technology	224,016	162,297	197,707	192,034	203,946	212,106	218,002	1,410,108
PE 0603879C Advanced Concepts, Evaluations and Systems	166,996	0	0	0	0	0	0	166,996
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	914,063	1,198,860	1,037,203	878,540	615,005	731,692	482,362	5,857,725
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	4,487,253	2,489,257	2,605,567	2,444,109	2,065,344	1,979,612	1,617,059	17,688,201

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification							Date February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets				
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
PE 0603883C Ballistic Missile Defense Boost Defense Segment	472,543	490,863	632,028	567,493	493,842	615,859	988,731	4,261,359
PE 0603884C Ballistic Missile Defense Sensors	567,193	294,283	536,428	554,012	623,089	306,965	217,590	3,099,560
PE 0603886C Ballistic Missile Defense System Interceptors	272,064	215,952	438,287	634,709	1,138,597	1,391,301	1,499,204	5,590,114
PE 0603889C Ballistic Missile Defense Products	384,935	394,652	521,640	517,507	534,429	530,893	531,219	3,415,275
PE 0603890C Ballistic Missile Defense System Core	398,852	420,151	558,231	557,880	561,003	548,354	554,731	3,599,202
PE 0603891C Special Programs - MDA	0	324,522	421,303	836,168	1,110,695	1,027,677	1,260,497	4,980,862
PE 0603892C Ballistic Missile Defense Aegis	0	939,066	990,565	857,832	900,265	933,815	816,206	5,437,749
PE 0603893C Space Tracking & Surveillance System	0	239,998	361,515	429,679	640,367	787,008	818,606	3,277,173
PE 0603894C Multiple Kill Vehicle	0	83,000	220,370	273,805	307,566	309,284	115,119	1,309,144
PE 0603895C BMD System Space Program	0	0	0	45,000	150,000	166,000	206,100	567,100
PE 0605502C Small Business Innovative Research - MDA	138,907	0	0	0	0	0	0	138,907
PE 0901585C Pentagon Reservation	11,001	17,386	15,586	6,058	6,376	4,490	4,725	65,622
PE 0901598C Management Headquarters - MDA	110,662	99,327	89,314	86,821	86,244	70,600	70,714	613,682
PE Air Force Military Personnel	0	3,628	7,640	8,332	8,535	8,826	9,129	46,090
PE Air Force Operations and Maintenance	17,600	7,964	11,712	33,830	33,080	34,119	35,398	173,703
PE Air Force Other Procurement	0	2,400	1,453	11,279	386	17,710	25,709	58,937
PE Army Operations and Maintenance	49,597	66,974	68,246	69,809	71,472	73,325	75,230	474,653
PE Army Natl Guard Military Personnel	21,000	17,648	24,432	24,952	25,591	25,591	25,591	164,805
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PE PAC-3/MEADS Missile Procurement	574,972	581,924	578,579	660,584	616,020	509,032	738,679	4,259,790
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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification					Date February 2006		
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets			
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COST (\$ in Thousands)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
0602 Program-Wide Support	4,456	6,543	7,525	6,706	5,894	11,226	5,838
RDT&E Articles Qty	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Program-Wide Support provides funding for common non-headquarters support functions across the entire program such as strategic planning, program integration, business management, cost estimating, contracting, and financial management, to include preparation of financial statements, reimbursement of financial services provided by DFAS, internal review and audit, earned-value management, and program assessment. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Many of these costs reside within the Missile Defense Agency Executing Agents in the Services: Army Space and Missile Defense Command, Army PEO Space and Missile Defense, Office of Naval Research, and various Air Force laboratory and acquisition activities, although some functions and costs within this program element are performed by MDA employees assigned within the National Capital Region (NCR). Other costs included herein provide facility capabilities for MDA Executing Agent locations, such as physical and technical security, legal services, travel and training, office and equipment leases, utilities and communications, supplies and maintenance, and similar operating expenses. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510, legal settlements, and foreign currency fluctuation on a limited number of foreign contracts.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007
Civilian Salaries and Support	4,456	6,543	7,525
RDT&E Articles (Quantity)	0	0	0

See Section A: Mission Description and Budget Item Justification

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification	Date February 2006
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
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C. Other Program Funding Summary								
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